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GRADUATE SCHOOL

U. S. DEPARTMENT OF AGRICULTURE

SPECIAL SERIES OF LECTURES ON DEPARTMENT OF AGRICULTURE OBJECTIVES

Fridays - Beginning October 9 to December 18, inclusive.
5 to 6 P.M.
R-E-V-I-S-E-D S-C-H-E-D-U-L-E
Auditorium - South Building
A. F. Woods, Director,
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With the approval of the Secretary of Agriculture, the Graduate School is offering a special course in Department of Agriculture Objectives.

The course will be based on a series of lectures, more or less overlapping but each looking at the Department from a broad public viewpoint. The purpose, however, will not be "publicity" or "propaganda." It will be a serious attempt to instruct employees and help them to orient themselves in relation to their work and to society. The lectures will deal with objectives, not work programs; they will emphasize not what we are doing, but where we are going.

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Subjects for General Lectures

Dr. C. W. Warburton, Director of Extension Service (October 9)

1. Extension Service Objectives.

Dr. Carleton Ball, Exec. Secy. of Coordinating Comm.T.V.A. & U.S.D.A. (October 16)

2. History of the Department and the development or growth of its objectives.

Dr. Albert G. Black, Chief, B.A.E. (October 23)

3. Economic objectives -- the place of the Department in the American economic system and the ideals toward which it is working.

Mr. Milton S. Eisenhower, Chief, Office of Information (October 30)

4. The organization of the Department -- as a means of carrying out objectives. How and why its form of organization is adapted to its purpose.

Dr. Howard R. Tolley, Administrator A. A. A. (November 6)

5. The future of the Soil Conservation Program.

Dr. W. W. Stockberger, Director Personnel (November 13)

6. Personnel objectives and how they contribute to Department objectives.

Dr. John R. Mohler, Chief, B.A.I. (November 20)

7. Scientific -- Why the scientific research and its general purpose. Why and how it contributes to the general public.

Mr. M. G. White, Solicitor (November 27)

8. The objectives of the regulatory work of the Department.

Dr. L. C. Gray, Asst. Administrator, Resettlement Adm. (December 4)

9. Conservation and planning the use of land -- what it means and its relation to the nation's future prosperity.

Prof. M. L. Wilson, Assistant Secretary of Agriculture (December 11)

10. The place of the Department in the evolution of agricultural policy.

Hon. Henry A. Wallace, Secretary of Agriculture (December 18)

11. General social and economic objectives of the Department. What we are trying to do for the people of the United States, why it should be done and why it can best be done by centralized effort.

The Graduate School will handle the series of lectures as a general training course. It will enroll applicants, issue admission cards, keep record of attendance, issue library references and such explanatory or correlating material as seems desirable.

The purpose of enrollment is to insure those who start the course that they will be able to continue. The seating capacity of the Auditorium will not accommodate all. The lectures will begin promptly at 5:00 and close at 6:00 P.M. No registration fee will be charged.

UNITED STATES DEPARTMENT OF AGRICULTURE

GRADUATE SCHOOL

EXTENSION SERVICE OBJECTIVES

By C. W. Warburton
Director of Extension Work
U. S. Department of Agriculture

Address, Department of Agriculture Auditorium, October 9, 1936

Friends of the Department: Doctor Woods has stated that in appearing at the beginning of this series of talks instead of at the end, as originally scheduled, I am meeting an emergency, and in that capacity I feel that I am in a very natural role because that is what the Extension Service is constantly doing. We are faced every few weeks or every few months with emergencies, with new problems to solve, so meeting emergencies is nothing new to us.

It is a little difficult to discuss the Extension Service at the beginning of this series of talks without giving you some preparatory statements which would have been made by other speakers if I had come in my original place at the end of the program.

The Extension Service, I think, might be thought of as a conduit through which the work of the Department, and not only the Department but the State Experiment Stations with which the Department cooperates and which are financed in part by the Federal Government, is carried to the rural people of the country. Talking about this distribution agency before you have some facts regarding the information it distributes is somewhat like talking about the distribution of automobiles before you know what an automobile is, what it is made of, and what it is supposed to do.

The Department of Agriculture started about 1838 or 1839 when Congress made a small appropriation to the Patent Office for the purpose of gathering agricultural statistics, this work being placed in the Patent Office because the Commissioner of Patents had expressed great interest in the matter. Whatever agricultural work was done by the Federal Government continued in the Patent Office until 1862, when Congress created the Department of Agriculture under the supervision of a Commissioner of Agriculture. It was not until 1889 that Congress elevated the head of the Department of Agriculture to Cabinet rank.

The same year that the Department of Agriculture was created, Congress passed what is known as the Land-Grant College Act (the Morrill Act), which set aside certain public lands to the States from the sale of which an endowment fund was to be created for the support

of land-grant colleges - colleges of agriculture and mechanic arts. Later, by Federal acts, direct appropriations to the States were provided for the support of these colleges.

Second in this system of Federal aid to the States for agriculture was the passage of the Hatch Act in 1887, authorizing appropriation of Federal funds for allotment to the States for the support of agricultural experiment stations. This Act in later years has been supplemented by three other Acts - the Adams Act in 1906, the Purnell Act in 1925, and lastly the Bankhead-Jones Act in 1935. Under these Acts each of the States receives a considerable amount of money for the support of a State agricultural experiment station.

During the years the Department of Agriculture and the State experiment stations had accumulated a great volume of research information which was of interest to the people of the country. Early in the present century many persons felt that this valuable information was not reaching the public, and particularly the rural people, as rapidly as it should and that another agency was needed to make this information readily available. So, in 1914, Congress passed another Act, the Smith-Lever Act, which provided annual appropriations by the Federal Government for grants to the States for the establishment in each State, at the Land Grant College, of a Cooperative Extension Service. Cooperative is a part of the official name of our organization. It is cooperative between the Federal Government and the States, and, as carried on in the States, it is cooperative with the counties. It is thus a three-way cooperation - cooperation between the Federal Government, the State governments, and the counties. The Extension Service, therefore, is not only a representative of the Department of Agriculture, but of the State Agricultural Colleges and the State Experiment Stations, which are in part Federally supported, in carrying the research information gathered by these agencies to the rural people of the United States.

What is the objective of the Extension Service? That is the principal thing I am to talk about, although in the very little time that I have had to organize and prepare my talk, I probably will talk a good deal more about what we are doing and how we are doing it, because with this information the objectives can be summed up in a very few words.

Primarily the object of the Extension Service is to make rural America a better place in which to live. How? Well, for one thing, by helping farmers to increase their incomes and, having increased their incomes, to show them how to spend that income for family living, commuhity improvement, and the things that go to make rural America better.

Extension work as we now know it started some years earlier than the passage of the Smith-Lever Act in 1914. The real beginning of extension work was some ten or eleven years earlier than that - to meet an emergency - that emergency being the invasion of the South by the cotton boll weevil. Congress in 1903 made an appropriation to the Department of Agriculture to meet that emergency. One method proposed to meet this emergency was the establishment of farm demonstrations,

first in Texas and later in other Southern States, to assist farmers in so changing their methods of growing cotton that they could reduce their losses from the boll weevil, and to encourage diversification of crops so that if their cotton crop was reduced, they would have some other crop to fall back on. The Department selected to head this work Dr. Seaman A. Knapp, who a good many years before had been for two or three years President of Iowa State College. Doctor Knapp, between that time and the start of the demonstration work in the South, had been in Louisiana and had played an important part in the development of the rice industry there. He had made two trips to Japan and other Oriental countries for the Department to bring back new varieties of rice which might be adapted to the United States. (This was a part of the very early plant introduction work of the Department).

Doctor Knapp had a philosophy of education that people learned by doing and learned by seeing others do; that you could teach people much more rapidly through demonstrations than you could through lectures, bulletins, or other means; that if a farmer saw his neighbor following a certain method in the growing of cotton or any other crop he was much more likely to go home and follow that method that if he had read about it somewhere or heard some one talk about it. Doctor Knapp, therefore, established in Texas what were known as demonstration farms, getting in each community a practical farmer to agree to grow his crop in accordance with methods recommended. From time to time meetings of the neighbors were called on the demonstration farm, at which meetings either the demonstration agent or the farmer himself, preferably the farmer, explained what had been done, how it had been done, why it had been done, and the results. The demonstration method is the keynote of the Extension Service, although the Service uses many other methods of teaching.

I said that the object of the Extension Service, briefly, was to make rural America a better place in which to live. Perhaps I can not do better than to quote from one of the early statements of Doctor Knapp with reference to what extension work aims to do. In his words, "The Farmers' Cooperative Demonstration Work aims at several things, - (1) to reform agriculture and make it an occupation of profit and pleasure. (2) to improve rural conditions. (3) to broaden and enrich rural life. (4) to make the farm attractive and country residence desirable". I think in these words Doctor Knapp has summed up very well what was then, some twenty-five years ago, and what is still the object of the Extension Service.

The Extension Service has always had a philosophy which perhaps now would be regarded as old-fashioned; a philosophy of helping people to help themselves. In some of the things that have happened in recent years we have perhaps gotten away from that philosophy, but we of the Extension Service still think it is good. Consequently, the work of the Extension Service has not been doing things for people, but helping them to do things for themselves. It has not been work of personal service, but rather work of community service. When the Extension Service gets a farmer or farm woman to carry out a demonstration on the farm or in the home, this is not only a service to them but a service to the community. The demonstration is carried on with the understanding that the extension agent may call meetings on the farm or in the

home, for the neighbors, so that they will have an opportunity to see what has been done and be able to go home and do the same things if they so desire.

When the Smith-Lever Act was passed in 1914, the Secretary of Agriculture entered into agreements with the presidents of the various State colleges of agriculture providing for the setting up in each State of a State Extension Service, with the selection of a State Director of Extension by the Board of Trustees of the College, subject to the approval of the Secretary of Agriculture, and when that director was agreed upon he became the representative of the Department of Agriculture in the State with reference to extension work. It was a part of that agreement that the Department would not go into a State and do independent extension work but that it would work through and with the State Extension Service set up by the college. Under that agreement the Department has not done independent extension work in the States.

The Extension Service here in Washington consists of three divisions - The Division of Cooperative Extension Work, the Division of Motion Pictures, and the Division of Exhibits. The Division of Cooperative Extension Work here consists of a comparatively small number of administrative people dealing with the State directors and their staffs on administrative problems, proper use of Federal funds and off-set funds, (the Acts under which we operate require that part of the Federal funds must be matched with State funds), etc. Then we have another group of people who are the subject matter specialists. These specialists office with the research bureaus they represent. We have an Extension Forester officing with the Forest Service; and Extension Dairyman officing with the Bureau of Dairy Industry; an Extension Animal Husbandman officing with the Bureau of Animal Industry, etc. It is their job to keep in touch with the research work of their respective bureaus, to carry information regarding that research to the specialists in their particular fields in the State extension services, and to carry information from State to State regarding methods of extension work in their particular fields. There is also in the Division of Cooperative Extension Work a section on Extension Studies which deals with the annual reports from the States, compiles statistics from such reports, and in other ways conducts studies on extension work; a Visual Instruction and Editorial Section which prepares material for publication, radio talks, etc., and an Economics Extension Section.

The Division of Exhibits and the Division of Motion Pictures are service organizations to the Department as a whole. The Division of Motion Pictures makes each year a considerable number of educational motion pictures illustrating different phases of the work of the Department. These pictures are proposed by the Bureaus, representatives of the Bureaus cooperate with representatives of the Division of Motion Pictures in the preparation of scenarios and in the photographing, and are kept informed as to the actual making of the picture clear through to the end of production. The Department then maintains a library of these motion picture films which are available for distribution.

The pictures are sent free, except for transportation charges, to those who request them. The largest users naturally are the extension agents and vocational teachers, but many other agencies also use the Department's motion pictures. They are used frequently in campaigns such as TB and tick eradication. We have motion pictures illustrating the work of practically every bureau of the Department. Our production is rather limited because of funds but we have a very large distribution,and in addition, many copies of the pictures are sold to institutions and agencies which themselves distribute them. Quite a number of colleges buy copies of our films and many are sold to foreign countries.

The Division of Exhibits is again a general departmental service organization the object of which is to present in exhibit form at State, interstate, National and international expositions within the United States, and, on specific authorization at expositions in foreign countries, the results of the work of the Department. We are limited by our appropriation language to exhibits at State, interstate, National and international fairs, although these exhibits are sometimes made available for other showings.

In each State, as I have said before, there is a State Extension Service, located at the land grant college, with a Director of Extension in charge who is responsible for the work in his State, Headquartered at the college also is the necessary administrative and supervisory staff, and the State subject matter extension specialists.

I have not yet mentioned, however, the real backbone of the Extension Service, the first line soldiers, the county agricultural and home demonstration agents who are located in the counties and who are actually in contact with the rural people. We have now, largely because of increased funds during the past two years, county agricultural agents in practically every county in the United States, with assistant county agents in some of the larger agricultural counties, and Negro agents in counties in the Southern States having a large Negro population. The number of these county agents runs somewhere around four thousand. We have about 1,500 women county home demonstration agents.

The work of the Extension Service is concerned with three groups - adult men along agricultural lines; adult women along lines of home demonstration work and economics, and boys and girls, mainly between the years of ten and eighteen, in what we know as 4-H Clubs. I think I need hardly tell a Department of Agriculture group very much about 4-H Clubs, because we have been having here in June for the past ten years, as delegates to the National 4-H Club Camp, a group of club members who have been a living exhibit of what 4-H Club work is and does. They have been right at our front door a number of years. Owing to the rearrangement of grounds we had to move away from the front door this year, but I am sure they were close enough for you to see what a really fine bunch of young folks they are. I might tell you, however, that last year there were enrolled in the 4-H Clubs over 997,000 young people, and reports so far this year indicate that that number will be very considerably exceeded in 1936. Club work is rapidly expanding and we

think it is one of the finest activities of the Extension Service. The object of club work -, and I must return to this question at least occasionally - is to train rural young people to be better citizens. I think perhaps that is about as short a statement and as true a statement as could be made. Each member in these 4-H Clubs conducts some useful project during the year, under the direction of the extension agent or a local volunteer leader. I might say here that the accomplishment of the Extension Service is very much greater because of the assistance given us by the hundreds of thousands of these local leaders, men and women who are interested in the work and who give their service without cost, month after month, to the Federal, State and county governments. The club member makes a report at the end of the year on the work accomplished, participates perhaps in a demonstration at the county or community club fair, perhaps goes to the State fair as an exhibitor, or goes to the State college for a short course, and each year four club members from each State, two boys and two girls, have the opportunity, because of their outstanding achievement in club work, to come here to Washington to what we think is the crowning event of 4-H Club work, the National 4-H Club Camp.

Just how does the Extension Service get to the rural people the research information which the Department compiles throughout the weeks and months? The first means, of course, is this carrying of information by the subject matter extension specialists to the specialists in the States, through them to the county agents, who in turn pass this information on to the people. This is one of many means. Information is furnished to the people through distribution of bulletins and circular letters, through radio talks, newspaper articles, motion pictures, and exhibits.

How is it decided what the extension program in a county will be? That decision is not readymade by the Extension Service of the Department or of the College, but it is decided upon by the people of the county themselves. Every year, along in January or February, in practically every county in the United States, you would find, probably on some Saturday, a group gathered in the office of the county agent, farm men and farm women who come together to discuss with the extension agents the program for the year. They are asked to tell their problems and when that information is gotten together from the different communities in the county, then the county agents and these farm people decide what their most important problems are and what means are available to meet these problems. For instance, it may be decided that one of the principal problems in the county is to establish a means of providing high protein feed for cattle. The county may in earlier years have grown clover and supplied the protein in that way, but for some reason that crop is no longer adapted to the county. Perhaps one or two farmers in the county or farmers in a neighboring county have been growing alfalfa and have found that this is one means of solving the problem, but alfalfa is not grown generally in the county. It is agreed that it would be desirable for some of the farmers to demonstrate the growing of alfalfa. After the farmers are chosen to make the demonstrations, the county agent gives them all the information possible as to preparation of the soil, selection of the seed, where to get the seed, treatment

of the seed, and how to sow it. When the alfalfa is to be sown a meeting is called at the farm of the demonstrator and the farmers are given an opportunity to see and hear at firsthand what has been done. Then some time the next summer, another meeting would be called, when these same people would have opportunity to come and see the result of the demonstration. It is has been successful, they have an opportunity to go back and do the same thing on their own farms. This is just a brief statement of how the extension program is set up and works.

Similarly, the home demonstration program is planned. It might deal with kitchen improvement, water systems, introduction of electricity, improvement of home grounds, or dozens of other projects.

Through the assistance of the extension agents the research information of the Department and of the State Experiment Stations, and the results of the work of the best farmers, is brought to the attention of the rural people and they are given opportunity to adopt these improved practices.

Just to sum it up in a word or two, the objective of the Extension Service is, on the one hand, to serve the Department of Agriculture as a conduit for the carrying of information from the Department to the people, and, on the other hand, to present that information to rural people in a form that they may use it for the betterment of conditions in rural America.

HISTORY OF THE U. S. DEPARTMENT OF AGRICULTURE AND THE DEVELOPMENT OF ITS OBJECTIVES

Carleton R. Ball

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HISTORY OF THE U. S. DEPARTMENT OF AGRICULTURE AND THE DEVELOPMENT OF ITS OBJECTIVES[a]

Dr. Carleton R. Ball,
Executive Secretary of the Coordinating Committee,
U. S. Department of Agriculture, Tennessee Valley Authority,
and Land-Grant Colleges

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The United States Department of Agriculture was created by an Act of Congress approved by President Lincoln on May 15, 1862, and effective on July 1, following. What had happened before 1862? Educators tell us that if we wish to understand a child we must begin our study with his grandparents. Similarly, if we wish to understand the development of this Department and its objectives, we must begin with the conditions and events of many years before.

For the purposes of logical presentation, it seems best to separate the discussion into three parts. All gall has been so divided since Caesar's day and the precedent need not be broken now.

The first part reviews the history of the development of agriculture itself in America. More especially it covers the 75-year period from about 1785 to 1860, inclusive. The second part covers the development of the Department of Agriculture, with its units of organization and its policies. The third part is devoted to an attempt to interpret the development of the objectives of the Department during the 75 years of its existence.

1. HISTORY OF THE DEVELOPMENT OF AGRICULTURE

The three fundamental needs of human beings are food, clothing, and shelter. Without them, we cannot live. All three in the main are agricultural products. Food is derived almost exclusively from agriculture, and will be until synthetic food is a product of laboratory manufacture. Clothing also is derived from the products of agriculture. This is true whether we consider the animal skins and fiber fabrics worn by primitive peoples, or the wool, linen, cotton, silk, and rayon of the present day. The materials for shelter, also, until very recently have been products of the land. This holds true whether we refer to the skin or hair-cloth tents of pastoral peoples, or the wooden houses which we still inhabit. Even brick and stone and cement are products of the land.

All peoples originally were agricultural. At first they were nomadic, in the beginning hunters, then pastoral peoples with their grazing,

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[a] Lecture 2 in the special course on Objectives of the Department of Agriculture, given in the Graduate School of the Department, on October 16, 1936.

flocks and herds. Gradually they settled in more or less fixed abodes, raised crops, and fed their domesticated animals.

All industries, commerce, and professions are superstructures on an agricultural foundation. Nations are great in proportion to their agricultural resources and ability. If any one cite industrial England as an example of the contrary, let us remember that the British Empire contains the enormous agricultural regions of Australia, Canada, India, New Zealand, and South Africa.

A. Early Agricultural Development in America

America originally was entirely agricultural and still is dominantly so. It was settled by farmers. Not all had been farmers when they left their native land, but practically all had to be when they arrived, even though they lived in towns and villages and were engaged in business and the professions. Most of them owned farms, many lived upon them, and practically all took part in their working. The great names of colonial America in administration, in education, and in science were the names of men who were farmers, of families that were raised on the land.

Starting with practically 100 percent of our population attached to the land, that percentage has decreased, decade by decade, until slightly less than 25 percent of the population were on farms in 1930 and slightly less than 26 percent in 1935, after five years of depression. Because of the large and rapid increase in our total population, the actual numbers of people on the land also increased until about 1910, then actually decreased until 1930, and then have slowly risen again during the depression.

American agriculture in colonial days, and much of it for some time thereafter, was self-sufficing. The farm grew all its own food, it grew and manufactured the materials for its own clothing, and it built its own shelters. If it could not do these things, it did not survive.

It is well to remember that practically all of the present marvelous advance in agriculture has been made in the last 150 years and most of it in the last 75 years. Until after the beginning of the nineteenth century, farming was done in much the same way as it had been done since the dawn of history. The turning of the soil was done with a wooden implement but little improved over that of the days of the Pharaohs. Seed was still scattered by hand. Reaping was still done with a curved blade hand-swung, whether in the form of the one-hand reaping hook or the two-hand scythe. Grain was still threshed or beaten out with the primitive flail. Only in the matter of the crude plowing and harrowing did the muscle of the horse or the ox relieve the labor of man.

In the 75 years before the Civil War of 1860, more agricultural progress was made than in all previous history. America acquired and conquered a continent equal to that of Europe, increasing its area 266 percent. Its population multiplied nearly 8 times, from 4,000,000 to 31,500,000. Trails, roads, turnpikes, steamboats, canals, railroads, and the telegraph were developed.

Agricultural societies were established from 1785 onward, farmers' clubs created (800 by 1831), and State Departments of Agriculture brought into being. Fairs and expositions grew from the casual showing of well-bred sheep in 1796 to local agricultural fairs in 1804, county fairs in 1810, and participation in the first international exposition in 1851.

In the field of agricultural literature, the first American journal appeared in 1819 and the first horticultural magazine in 1835. By 1860, just 40 out of 4,000 periodicals, or one percent, were devoted to some phase of agriculture. Township libraries were first established in New York in 1837 and in other States rapidly thereafter.

Agricultural teaching grew from a single chair in Columbia University in 1792, through a series of short-lived local schools beginning in 1823, to agricultural colleges, of which 5 developed between 1854 and 1860.

It was in the field of machinery, however, that the greatest advance was made. Beginning with the invention of the cotton gin in 1796, the progress was rapid. The wooden plow and the wooden harrow gave way to tools of iron by about 1825 and then to tools of steel. Human labor steadily was replaced by that of the horse and the machine. The metal plow improved cultivation, the invention and use of the mower and then the reaper in the first half of the century made it possible for fewer persons to harvest larger acreages, and the surplus labor thus created went to settle new areas.

Crop production doubled every 10 years under this stimulus. Better varieties were developed and additional crops were introduced and improved. Most of the important breeds of all classes of livestock were introduced or developed to high standards within this period.

B. Early Official Attitudes Toward Agriculture

In general, practically all of the progress and improvement in agriculture which has just been recited was accomplished by the farmers of America themselves, without official assistance. Many government officials, however, gave much assistance in their capacity as private citizens. At the very beginnings of our national existence, a movement was started to organize a national agricultural society under Federal auspices. This was recommended by Adams in 1776 and by Washington from 1789 onward. A Federal patent law was enacted in 1784, at a time when practically all articles offered for patent related to agriculture.

Local agricultural fairs received official support as early as 1804, and a national agricultural society founded in 1809 held fairs in the District of Columbia with Federal encouragement. The Berkshire Agricultural Society in Massachusetts recommended to the National Congress in 1817 the creation of a National Board of Agriculture, but without avail.

The Federal House of Representatives created a Committee on Agriculture in 1820 and the Senate a similar Committee in 1825. There is reason to believe, however, that these committees were provided not to promote

agriculture but to pigeonhole any bills designed to favor agriculture.

The Federal Government, as the British Colonial Government before it, occasionally gave direct aid to some special agricultural enterprise held to be desirable in our national agricultural economy. Silk growing was subsidized by the Congress in 1826 and again in 1828. The House of Representatives in 1830 requested the President to obtain sugar cane, among other agricultural products, and directed the Secretary of the Treasury to prepare a manual on the culture of sugar cane and the refining of sugar. This was done by Professor Silliman of Yale University, in cooperation with other chemists, and published in 1833.

Plant introduction was sponsored by Federal officials at a very early date. Franklin and others sent seeds and cuttings to the homeland while representing the Penn Colony or the young republic on diplomatic missions abroad. In later years, government orders were sent to our consular and naval officers, from time to time, to obtain new seeds and plants wherever their duties caused them to travel. No provision was made by Congress, however, for their care or distribution after arrival. As early as 1836, the then Commissioner of Patents, Henry L. Ellsworth, began the distribution of this material, apparently without any warrant in law. A year later, he recommended the creation of a Federal agricultural agency. In 1838, a grant of land was made by Congress to Henry Perrine, a citizen of Florida, for his work in introducing and growing various useful tropical plants.

The first direct appropriation for agriculture was $1,000, made to the State Department for the Commissioner of Patents in 1839 for compiling statistics, introducing and distributing seeds and cuttings, and making investigations to promote agriculture and rural economics. This appropriation was continued, though not in each succeeding year. In 1849, the Department of the Interior was created and the Patent Office with its Agricultural Section transferred thereto.

President Taylor in 1849 and President Fillmore in 1851 recommended to Congress the creation of government machinery to promote agriculture. From 1852 to 1861, the National Convention of Agricultural Societies and other organizations and individuals repeatedly recommended to the Congress that a national Department of Agriculture be established.

Nothing could be accomplished during this period, however, partly because of the turmoil in the public mind over the slavery issue, partly because the southern States, dominantly agricultural, were opposed to any extension of Federal power, and partly because many farmers still were skeptical of the value of "book larnin'."

In the meantime, the need for some Federal agricultural agency was increasing steadily. New diseases and insect pests of crops and livestock had been introduced from abroad. Thicker rural settlement allowed more rapid spread of pests from farm to farm and the coming of the railroads permitted more rapid spread from area to area. Settling of new western areas brought need for new and adapted crops and cropping methods. Economic problems also became intensified as commercial agriculture developed.

2. DEVELOPMENT OF THE DEPARTMENT OF AGRICULTURE

The United States Department of Agriculture was created by an Act of Congress approved by President Lincoln on May 15, 1862. How did it happen that the Congress took this action in the midst of the stress of civil war, when for nearly 70 years it had refused to make any permanent provision for agriculture? The reasons are several, and clear.

The agricultural and congressional leaders from the northern States had long been favorable to the idea. With increasing numbers of men removed from agriculture for military service, they felt an increasing need for agencies to stimulate food production. Many southern agricultural and congressional leaders had opposed the plan as tending to expand the power of the Federal government. These leaders were no longer in the Congress. Finally, the gradual development of the public school system in general and the agricultural schools in particular had tended to overcome the farmer prejudice against book knowledge. For all these reasons, the action was easily taken.

The year 1862 was historic also, for two other agricultural acts of far-reaching significance passed by the same Congress. One was the Morrill Act, creating the system of Land-Grant Colleges of Agriculture and the Mechanic Arts, approved on July 2, 1862. The other was the National Homestead Act of April 10, 1862, under which any citizen over 21 years of age was entitled to a homestead of 160 acres of the public domain by complying with certain rules as to residence and improvements, and the payment of a small fee.

A. Statutory Objectives and Functions of the Department

It is well to take note, at this point, of the objectives specified by the Congress for its newly-created Department. This Department, by the way, was headed by a Commissioner who had no seat in the Cabinet, rather than by a Secretary having cabinet rank. The following sections are quoted from the original Act:

> "Sec. 1. That there is hereby established at the seat of government of the United States a Department of Agriculture, the general designs and duties of which shall be to acquire and to diffuse among the people of the United States useful information on subjects connected with agriculture in the most general and comprehensive sense of that word, and to procure, propagate, and distribute among the people new and valuable seeds and plants."

> "Sec. 3. That it shall be the duty of the Commissioner of Agriculture to acquire and preserve in his department all information concerning agriculture which he can obtain by means of books and correspondence, and by practical and scientific experiments (accurate records of which experiments shall be kept in his office), by the

collection of statistics, and by other appropriate means within his power; to collect, as he may be able, new and valuable seeds and plants; to test, by cultivation, the value of such of them as may require such tests; to propagate such as may be worthy of propagation, and to distribute them among agriculturists."

In Section 24 it was further provided that the Commissioner was to:

"employ other persons, for such time as their services may be needed, including chemists, botanists, and entomologists, and other persons skilled in the natural sciences pertaining to agriculture."

B. Periods in the Development of the Department

The history of the U. S. Department of Agriculture may be separated somewhat arbitrarily, into 4 periods, 3 past and the fourth just begun. Each successive period is characterized by the addition of a new primary objective and function in the activities of the Department, by the origin of a new trend or procedure in the development of Departmental structure and operation, and by the gradual emergence of a broader personnel outlook or perspective on the problems and relations. For convenience, these data for the Federal Department of Agriculture are presented in tabular form below.

Period of Years			Major New Objective	Principal New Function	Structural Trend	Personnel Outlook
No.	Duration	Total Years				
1.	1862-1887	25	Improvement	Investigation	Development	Individual
2.	1888-1912	25	Protection	Regulation	Organization	Bureau
3.	1913-1932	20	Education	Extension	Coordination	Departmental
4.	1933-1962	30	Stabilization	Planning	Cooperation	National

As shown in the table, there have been four major objectives of the Federal Department with reference to American agriculture. These four agricultural objectives, in the order of their development, are:

a. Improvement of crops, livestock, soils, and their products, and of equipment and structures, and methods of production.

b. Protection of crops and livestock, and their products, of equipment and structures, and of the land itself, from diseases and pests and the effects of environment, and protection of producer and consumer from unfair trade practices.

c. Education of the farm family, adult and juvenile alike, in better materials, methods, and living standards, and education of all consumers in the agricultural problem as it affects the entire country.

d. Stabilization of agriculture to avoid the recurrent cycles of boom and depression, to insure plenty without burdensome surplus, and to maintain a proper parity with other industries, looking toward a satisfying physical, economic, and social status for agriculture.

Each successive period of activity has resulted from long-continued preparation in earlier periods. That is, public sentiment or demand for that particular objective or type of activity had been developing through a long period of time. The new objective, function, structural trend, and personnel outlook typical of each period had their roots, therefore, in the thinking of still earlier years.

The objective, function, trend, and outlook characteristic of each earlier period likewise are continued through all the later ones. The earlier objectives, functions, and trends have expanded with each successive period, but the earlier personnel outlooks have diminished. For instance, the first function, investigation, was begun before the Department was organized, constituted the chief new function of Period 1, and has continued at an increasing rate through all later periods. So has development or expansion as a structural trend. Individualism as a personnel outlook, however, has diminished but not disappeared.

As noted in the table above, there are 4 major agricultural functions of the Federal Department of Agriculture. There is a fifth non-agricultural function, Highway Construction, to be mentioned briefly later. The four agricultural functions, in the order of their development, are:

a. Research, investigation, or experiment: Fact finding.

b. Regulation, or control or eradication of harmful organisms and practices: Law enforcement.

c. Extension, or non-resident teaching: Fact distribution.

d. Planning, or determination of a long-range national program of planned and stabilized development, production and distribution: Program planning.

These four functions are exercised for the benefit, not of the agricultural population alone, but of all classes of the population. This includes producers, handlers, and consumers, representing agriculture, commerce, and industry, and the citizenry in general.

Before taking up a discussion of the four periods of development and of the bureau structure of the Department, it is desirable to subdivide

each of the four functions into its major divisions and their respective subdivisions.

a. Research, Investigation, or Experimentation: Fact Finding.

(1). Production and improvement of livestock, crops, methods, and equipment. (Make it better.)

(2). Protection of animals, plants, and equipment from diseases and pests (bacteria, fungi, insects, other animals, weeds, poisonous plants, etc.), and from physical environment (climate, soil, water, etc.). (Make it safe.)

(3). Economics of production and distribution (outlooks, statistics, costs, prices, demands, quality, management, finance, land use, cooperative organizations, etc.). (Make it pay.)

b. Regulation, or Control and Extermination: Law Enforcement.

(1). Quarantine and control or eradication measures and campaigns to regulate or prevent the international or interstate movements of injurious (competitive or disease-producing) plants or animals, or to reduce, limit, or eradicate harmful plants and animals, or diseases caused by parasitic plants and animals.

(2). Regulation of the quality of services of commercial organizations, especially storage, transportation, and handling services (U. S. Warehouse, Humane Transportation, and Packers and Stockyards Acts) and sales services (Cotton and Grain Futures Acts, Perishable Commodity Act).

(3). Standards of quality for products and containers. (Food and Drugs Act, Cotton and Grain Standards Acts; Standard Container Act).

c. Extension or Non-Resident Teaching: Fact Distribution.

(1). Information on the improvement and production of livestock, crops, equipment, structures, and methods.

(2). Information on the protection of plants, animals, soils, equipment, and structures from diseases, pests, and physical environment.

(3). Information on the economics of agriculture, as tabulated under "a. Research," above.

(4). Information on rural social organization and betterment, including boys' and girls' activities, rural leadership, cooperation, and community organization and development.

d. Planned and Stabilized Production and Distribution.

(1). Land-use planning, including determination of quality and needs, and allocation to best uses, as agriculture, forestry, water and soil conservation, flood and erosion control, wildlife conservation, recreation, etc.

(2). Program planning for stabilization of production and distribution, through cooperative determination of prospective needs and markets, cooperative allocation of acreages and quantities, cooperatively controlled movement, and crop insurance against loss.

(3). Rural rehabilitation and community stabilization, through planned and stabilized use of land and other natural resources, gradual relocation of population from submarginal areas, decentralization of some urban industries and development of part-time rural industries, and assistance in reorganization of units of local government.

e. Highway Construction (Non-agricultural).

(Cooperation with State agencies, under law, in construction of primary highways).

The chronological development of the organization structure of the Department is shown, for each of the four periods, in the tabulations which follow.

(1). DEVELOPMENT, INVESTIGATION, OR IMPROVEMENT PERIOD, 1862-1887. (25 years).

Major New Objective: Improvement of Agriculture.
Chief New Function: Investigation or Fact-Finding.
Principal Structural Trend: Development or Foundation Laying.
Dominant Personnel Outlook: Individual.

In the Development Period, new lines of investigation were added from time to time as new problems developed. The coming of the Organization Period was foreshadowed by the creation of one bureau, the Bureau of Animal Industry, by Congress, in 1884.

a. Units Created, Chronologically Arranged:

1862: Division of Chemistry,
Propagating Garden,
Library.

1863: Division of Entomology,
Fiber Investigations,
Division of Statistics.

1865: Analysis of Soils. (1865-1866).

1868: Division of Botany.

1871: Division of Microscopy.

1876: Forestry Investigations.

1878: Investigation of Animal Diseases.

1880: Forestry Division.

1883: Veterinary Division.

1884: BUREAU OF ANIMAL INDUSTRY (created by Congress).

1885: Section of Ornithology in Division of Entomology.

1886: Division of Economic Ornithology and Mammalogy,
Division of Pomology.

1887: Division of Vegetable Physiology and Pathology.

b. Units of Future Bureaus (mostly formed in Organization Period):

1. Agricultural Economics:

Division of Statistics (1863).

2. Animal Industry:

Investigations of Animal Diseases (1878).
Veterinary Division (1883).
BUREAU OF ANIMAL INDUSTRY (by Congress, 1884).

3. Biological Survey:

Section of Ornithology in Division of Entomology (1885).
Division of Economic Ornithology and Mammalogy (1886).

4. Chemistry:

Division of Chemistry (1862).

5. Entomology:

Division of Entomology (1863).

6. Forest Service:

Forestry Investigations (1876).
Division of Forestry (1880).

7. Library: (1862).

8. Plant Industry:

Propagating Garden (1862).
Fiber Investigations (1863).
Division of Botany (1868).
Division of Microscopy (1871).
Division of Pomology (1886).
Division of Vegetable Physiology and Pathology (1887).

9. Soils:

Analysis of Soils (1865 to 1866).

10. (Weather, in Signal Corps, War Department, 1870.)

(2). ORGANIZATION, REGULATION, OR PROTECTION PERIOD, 1888-1912. (25 years).

Major New Objective: Protection of Agriculture.
Chief New Function: Regulation or Law Enforcement.
Principal Structural Trend: Organization of Bureaus.
New Personnel Outlook: Bureau perspective.

Period characterized by:

The organization of numerous small units into 8 new Bureaus (making a total of 9) and the addition of other new small units destined to become bureaus in the third period;

The rapid increase of regulatory legislation and the assuming of regulatory functions by most of the Bureaus and Offices, administered either by the research units concerned or by special regulatory units in these research Bureaus and Offices;

The rapid increase of research units and activities begun in Period 1, and the beginning of the extension agencies and activities which characterize Period 3;

A broadening of personnel perspective from individual achievement to the program of the organization unit, and the beginning of cooperation.

a. Organization Units, Chronologically Arranged:

(New Bureaus in CAPITALS, new offices of quasi-Bureau rank in italics.)

1888 Office of Experiment Stations (see 1915, 1923).

1889 Secretary of Agriculture (Cabinet member; replaced Commissioner)
Assistant Secretary of Agriculture
Farmers' Institute data compiled and published by the Office of Experiment Stations (see 1903)

1890 Division of Publications (see 1925)
Office of Irrigation Inquiry (to 1895; see 1899)

1891 WEATHER BUREAU (transferred from War Department, see 1870, and made a Bureau)
Office of Appointment Clerk (see 1925)
(Forest Reservations, Interior Department, by Presidential Proclamation; see 1901)

1893 Office of Road Inquiry (see 1906, 1915, 1919, 1931)

1894 Section of Foreign Markets (see 1913)
Division of Agricultural Soils (in Weather Bureau; see 1865, 1895)
Nutrition and Home Economics Investigation (in Office of Experiment Stations; see 1915, 1923)

1895 Division of Agrostology (see Plant Industry, 1901)
Dairy Division (in Bureau of Animal Industry; see 1924)
Division of Agricultural Soils (see 1894; 1897)

1896 Division of Biological Survey (see 1885, 1886, 1905)

1897 Division of Soils (see 1865, 1894, 1895, 1901)

1899 Division of Irrigation Investigations (in Office of Experiment Stations; see 1890, 1915)

1901 CHEMISTRY, BUREAU OF (see 1862, 1927)
FORESTRY, BUREAU OF (see 1876, 1880, 1891, 1905)
PLANT INDUSTRY, BUREAU OF (see 1862, 1863, 1868, 1871, 1886, 1887, 1895)
SOILS, BUREAU OF (see 1866, 1894, 1927)

1902 Farm Management Investigations (in Bureau of Plant Industry; see 1915)
Farm Machinery and Farm Structures Investigations (in Office of Experiment Stations; see 1908)

1903 STATISTICS, BUREAU OF (see 1863, 1921, 1922)
Farmers' Institute Specialist (in Office of Experiment Stations; see 1889)

1904 ENTOMOLOGY, BUREAU OF (see 1863, 1933)
Farmers' Cooperative Demonstration Work (in Bureau of Plant Industry; see 1915)
Division of Irrigation and Drainage Investigations (in Office of Experiment Stations; see 1899, 1908)

1905 BIOLOGICAL SURVEY, BUREAU OF (see 1885, 1886, 1896)
FOREST SERVICE (new name; see 1901)
Office of the Solicitor

1906 Office of Public Roads (see 1893, 1915, 1919, 1931)
Farm Management Demonstrations, North. (In Bureau of Plant Industry; see 1915)
Fruit Marketing Investigations (in Bureau of Plant Industry; see 1913, 1914, 1917)

1908 Division of Drainage Investigations (in Office of Experiment Stations; see 1904, 1915)
Division of Irrigation Investigations (in Office of Experiment Stations; see 1904, 1915)
Farm Machinery and Farm Structures Investigations (in Division of Farm Management; see 1902, 1915)

1910 Insecticide and Fungicide Board (see 1927)

1912 Federal Horticultural Board (see 1928)

b. Regulatory or Supervisory Acts and Units.

It is significant that the first unit added in the Period of Organization (Regulation) was partly supervisory in function, and that the last one added was wholly so.

It is significant also that there were very few regulatory acts pertaining to agriculture previous to the opening of this period. The earliest and most important one is listed below.

1873 Humane Transportation (28-Hour Livestock Shipping) Act. (1906) (Bu. of Animal Industry)

1887 Hatch Act (Creating State Agricultural Experiment Stations)

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1888 Office of Experiment Stations (Supervisory)

1890 Meat Inspection Act (Bu. of Animal Industry)

1891 (Forest Reservations, in Interior Department)

1893 Animal Quarantine Act (1903, 1905) (Bu. of Animal Industry)

1894 Sec. of Agr. required by Congress to audit and supervise expenditures of State Agricultural Experiment Stations.

1897 Tea (Adulteration) Act (Bu. of Chemistry; Food and Drug Administration)

1900 Lacey (Wildlife Conservation) Act (1909) (Bu. of Biological Survey)

1901 Grain Standards Act (1916) (Bu. of Plant Industry; Bu. of Agricultural Economics)

1902 Renovated-Butter Factory Inspection Act (Bu. of Animal Industry; then Bu. of Dairy Industry)
Virus-Serum-Toxin Act (1913) (Bu. of Animal Industry)

1905 Insect Pest Act (Bu. of Entomology; Federal Horticultural Board; Bu. of Plant Quarantine)

1906 Adams Act (State Station funds) (Office of Experiment Stations)
Bird Refuge Act (1909, 1924) (Bu. of Biological Survey)
Food and Drugs Act (Bu. of Chemistry)

1908 Alaska Game Act (1910, 1924) (U.S. Department of Agriculture, and Alaska Game Commission)
Cotton Standards Act (Bu. of Plant Industry; Bu. of Agricultural Economics)

1910 Insecticide Act (Insecticide and Fungicide Board)
Insecticide and Fungicide Board (see 1927)

1911 Weeks (Forest Watershed) Act (Forest Service)

1912 Plant Quarantine Act (Federal Horticultural Board)
Federal Horticultural Board
Federal Seed (Importation) Act (Bu. of Plant Industry)
Migratory Bird (Protection) Act of March 4, 1913 (Bu. of Biological Survey) (see 1916, 1918)

(3). COORDINATION, EXTENSION, OR EDUCATION PERIOD, 1913-1932. (20 years).

Major New Objective: Education of Agriculture.
Chief New Function: Extension or Non-resident Teaching.
Expanded Previous Functions: Research and Regulation.
Principal Structural Trend: Coordination of Functions.
New Personnel Outlook: Departmental (Federal-State).

Period characterized by:

The coordination of the research, regulatory, and extension functions, their allocation to separate divisions or bureaus, and the appointment of three new officers, the Directors of Scientific Work, of Regulatory Work, and of Extension Work, respectively, to supervise and coordinate these three departmental functions;

The continued expansion of research and regulation, the creation of new small units, and the organization of these and previous units into Bureaus or Services, Administrations, and Offices of equivalent scope, and the uniting of some of these into still larger Bureaus. During the period, 11 Bureaus, 2 Services, 2 major Administrations, and 2 major Offices were created by consolidation or division of previous units, including Bureaus, or by changing names. Because of these facts the net gain, at the end of the period, was 7 Bureaus, 1 Service, 1 major Administration, and 2 major Offices. However, 2 of the previous 9 Bureaus were united into one of these 7, making a total of only 14 Bureaus at the end of the period;

The gradual broadening of the personnel outlook to a departmental perspective on problems and relations, and an enormous increase in departmental inter-unit and Federal-State cooperation;

The beginnings of the national program of cooperatively planned readjustment of agriculture, including financing, land-use planning, soil conservation, and regional rehabilitation, which characterizes Period 4.

a. Organization Units and Extension Acts (Chronological):

1913 Office of Exhibits (Now in Extension Service; see 1923)
Office of Markets (see 1894, 1906, 1914, 1917, 1921, 1922)

1914 Office of Inspection (Business Administration; see 1925)
Office of Forest Appeals (see 1901)
Smith-Lever (Agricultural Extension) Act (see 1928, 1930)
Office of Markets and Rural Organization (see 1913, 1915, 1917)

1915 STATES RELATIONS SERVICE, 1915-1923.

Office of Experiment Stations (see 1888; 1923)
Office of Home Economics (see 1894; 1923)
Office of Cooperative Demonstration Work, South (see 1904)
Office of Cooperative Demonstration Work, North (see 1906)

Office of Farm Management (see 1902, 1922)
Market News Services (see 1913, 1914, 1917)
Office of Public Roads (see 1893, 1916, 1919, 1921)
and Rural Engineering (see 1890, 1899, 1902, 1904, 1908, 1919, 1931)

1916 Federal Highway Act (see 1915, 1919, 1921)

1917 MARKETS, BUREAU OF (see 1894, 1906, 1913, 1914, 1921)
(Smith-Hughes (Vocational Education) Act (Federal Board of Vocational Education))

1918 Seed Loan Office (drought, flood, and hurricane relief loans; see 1933)

1919 PUBLIC ROADS, BUREAU OF (see 1893, 1915, 1916, 1921, 1931)

1921 MARKETS AND CROP ESTIMATES, BUREAU OF (see 1903, 1913, 1917, 1922)
Director of Scientific Work (Research)
Department Educational Courses (Graduate School)
Federal-Aid Road Act (see 1916, 1919)
Fixed Nitrogen Laboratory (from War Department; see 1927)

1922 AGRICULTURAL ECONOMICS, BUREAU OF (see 1915, 1917, 1921)

Crop and Livestock Estimates, Statistics (see 1863, 1903, 1921)
Foreign Service
Farm Management (see 1902, 1915)
Cooperative Marketing
Marketing (Commodity Groups) (see 1894, 1906, 1914, 1917, 1921)
Warehousing
Land Economics
Farm Population and Rural Life
Agricultural Finance

1923 Director of Regulatory Work (see lists of regulatory acts; also 1927, 1933)
Director of Extension Work (see 1914, 1915)
EXTENSION SERVICE (see 1914, 1915)

Office of Cooperative Extension Work (see 1904, 1906, 1914, 1915)
Office of Exhibits (see 1913)
Office of Motion Pictures
HOME ECONOMICS, BUREAU OF (see 1895, 1915)
EXPERIMENT STATIONS, OFFICE OF (see 1888, 1915)
Office of Editorial and Distribution Work (see 1890)
Grain Futures Administration (see 1936)

1924 DAIRYING BUREAU OF (from Bureau of Animal Industry, see 1895; name changed to DAIRY INDUSTRY, 1926)
Clarke-McNary (Forest Extension) Act (Extension Service)

1925 Office of Information

Press Service (extension and publicity)
Publications (see 1890, 1923)
Radio Service (extension and publicity)
Office of Business and Personnel Administration. 9 units. (see 1891, 1914)
Purnell Act (financing State Experiment Stations)
Office of Experiment Stations supervisory (see 1887, 1888, 1906, 1936)

1926 DAIRY INDUSTRY, BUREAU OF (new name; see 1895, 1924)

1927 CHEMISTRY AND SOILS, BUREAU OF (see 1901, 1921)
(Union of 2 Bureaus and Fixed Nitrogen Laboratory)
FOOD AND DRUG ADMINISTRATION (see 1906; including Insecticide and Fungicide Board (see 1910)

1928 PLANT QUARANTINE AND CONTROL ADMINISTRATION (see 1912, 1932)
Capper-Ketcham (Agricultural Extension) Act (see 1914, 1930)
Packers and Stockyards Administration (see 1921) transferred to Bu. of Animal Industry

1929 (Federal Farm Board (Agricultural Marketing Act) created)
Office of Cooperative Marketing (see 1922) transferred to Federal Farm Board from Bureau of Agricultural Economics

1930 Smith-Lever (Supplementing Agricultural Extension) Act (see 1914, 1928, 1936)

1931 AGRICULTURAL ENGINEERING, BUREAU OF (see 1890, 1899, 1902, 1904, 1908, 1915, 1919)

1932 PLANT QUARANTINE, BUREAU OF (see 1912, 1928, 1934)

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(1934 ENTOMOLOGY AND PLANT QUARANTINE, BUREAU OF (see 1904, 1932))

b. Regulatory Units and Principal Acts Added:

Although extension was the chief new function characterizing Period 3, there was such an increase in regulatory Acts and activities that it seems desirable to list them separately.

1913 Office of Markets
Grain and Cotton Standards Acts
Migratory Bird (Protection) Act of March 4 (see 1916, 1918)

1914 Smith-Lever (Agricultural Extension) Act (Controlled by States Relations Service)
Cotton Futures Act of Aug. 18 (Office of Markets) (see 1936)

1915 States Relations Service (Supervisory of State Experiment Stations and Extension Service)
Terminal Inspection (mail packages) Act

1916 U. S. Warehouse Act (Office of Markets)
Migratory Bird Treaty (with Great Britain in re Canada)
Cotton Futures Act of Aug. 11 (see 1914)
Federal Aid (Highway) Act of July 11 (see 1893, 1906, 1915, 1919, 1931)

1917 Mexican Border Inspection Act (Federal Horticultural Board)
Standard Container Act (Office of Markets) (see 1928)
(Vocational Education Act of Feb. 23 (Federal Board for Vocational Education))

1918 Migratory Bird Treaty Act (July 3) (see 1912, 1913, 1916)

1919 MARKETS, BUREAU OF

1921 Packers' and Stockyards Act (Packers and Stockyard Administration, in Bu. of Animal Industry)
Federal Highway Act of Nov. 9 (see 1916)

1922 AGRICULTURAL ECONOMICS, BUREAU OF

1923 Director of Regulatory Work
Director of Extension Work (Supervisory)
Grain Futures Act (Grain Futures Administration) (see 1936)
Naval Stores Act (Bu. of Chemistry, then Food and Drug Administration)

1926 Export Plant Certificate Act

1927 FOOD AND DRUG ADMINISTRATION
Caustic Poison Act (Food and Drug Administration)
Import Milk Act (Dairy Industry, then Food and Drug Administration)

1928 PLANT QUARANTINE AND CONTROL ADMINISTRATION (see 1932)
Standard Hamper Act (Bu. of Agricultural Economics; see 1917)

1932 PLANT QUARANTINE, BUREAU OF (see 1928, 1934)

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1933 Office of Director of Regulatory Work discontinued.

1934 ENTOMOLOGY AND PLANT QUARANTINE, BUREAU OF

(4). COOPERATION, PLANNING, OR STABILIZATION PERIOD, 1933-1962 (30 years).

Major New Objective: Stabilization of Agriculture.
Chief New Function: Planning.
Expanded Old Functions: Investigation, Regulation, Extension.
Principal New Structural Trend: Cooperation in Activities.
New Personnel Outlook: National.

The Cooperation or Planning Period is characterized by:

Planning for the stabilization of the agricultural industry as a whole, and to restore and maintain its parity with other industries;

Planning for a level of cultural opportunity and attractive and satisfying environment under rural conditions as high as can be achieved under urban conditions;

The concept of the nation as an agricultural unit rather than as a collection of sections, States, counties, communities, or individual farms;

Consideration of the economic life of the United States as one economic and social problem, rather than as the separate problems of agriculture, commerce, finance, industry, transportation, labor, or the professions;

The viewpoint that the welfare of the people of the United States is the joint welfare of one people and not the separate welfares of producers, handlers, and consumers;

Development of a completely coordinated program of conservation and stabilized use of all the natural resources related to agriculture, including land, soil, water, vegetative cover, wild life, recreation, minerals, air, and radiation;

Expansion of the program of cooperation to include all Federal, State, regional, or local official agencies having activities of mutual importance and responsibility, and with a much fuller participation of private individuals and corporations, for the common good.

a. Organization Agencies and Important Acts:

1933 Agricultural Adjustment Act, of May 12.
Agricultural Adjustment Administration.
Soil Erosion Service transferred from the Dept. of Agriculture to the Dept. of the Interior.
Office of Director of Regulatory Work discontinued.

1934 Entomology and Plant Quarantine, Bureau of (Union of two Bureaus, see 1904, 1928, 1932)
Under Secretary of Agriculture

1935 Soil Conservation Service. Established after retransfer of soil erosion activity from Dept. of the Interior to the Dept. of Agriculture. The Secretary issued a written statement, based on Committee recommendations, declaring that its activities shall be cooperative with the several States.

Bankhead-Jones ( ) Act of June 29. Provides additional Federal financing of research (Federal, Federal-State-regional, see 1862, 1887, 1906, 1925), extension (Federal-State, see 1914, 1928, 1930), and teaching (State Land-Grant Colleges, see 1862, 1890, 1917)

1936 Soil Conservation and Domestic Allotment Act of Feb. 29. (see 1933, Agricultural Adjustment Act.)
Commodity Exchange Act (of 1923) as amended on June 15.
Commodity Exchange Administration. Superseded the Grain Futures Administration on July 1 and, effective on Sept. 13, supervises all trading in cotton, mill feed, butter, egg, potato, and rice futures on commodity exchanges designated by the Secretary.

b. Other Agencies and Acts Related to Agriculture:

The period has been characterized by a widespread development of the planning approach to the economic and social problems of agriculture from many different angles. Among the agencies created for long-range planning, which have activities closely related to the program of the Department of Agriculture are the following:

1933 Emergency Conservation Work (Civilian Conservation Corps) created on April 5. It conserves and develops natural resources, including Federal and State forest lands, parks, watersheds, T.V.A. areas, etc., through the use and conservation of otherwise unemployed young men.

1933 Farm Credit Administration. A consolidation of all previous agencies, and creation of some new ones, for furnishing credit to farmers for refunding mortgages, expanding facilities, seasonal production, and emergency financing in case of disaster.

1933 Federal Emergency Administration of Public Works (Public Works Administration, PWA). Provides unemployment relief through construction of public works and long-range planning in that field. Loans to public

agencies are made at 4%, grants may be made up to 45% of the total cost, and grants may be made without loans.

1933 National Resources Committee (formerly National Planning Board and National Planning Committee). A national planning agency devoted to the inventory, conservation, and stabilized use of all our material national resources. It encourages the formation of State and regional planning boards, furnishes consultants to them, and works in cooperation with them and with private agencies.

1934 Division of Grazing, Department of the Interior. Administers all grazing districts on the public domain, as established under the Taylor Grazing Act of June 28, and classifies public lands for agricultural and grazing purposes.

1935 Resettlement Administration (composed of units created from 1933 onward, including the Land Policy Section of the A.A.A., Subsistence Homesteads Division of the Interior Department, and the Rural Rehabilitation Division of the FERA). Now composed of 4 Divisions affecting agriculture, namely, Land Utilization, Rural Rehabilitation, Rural Resettlement, and Suburban Resettlement. Classifies, determines effective use of, and purchases land, either for retirement or for improvement and resale to resettled or rehabilitated purchasers, also furnishes equipment and supplies for rehabilitating in place.

1935 Rural Electrification Administration. Created by Executive Order of May 11 and confirmed by Act of May 20, 1936. Designed to formulate and administer a program of approved projects in generation, transmission, and distribution of electric energy in rural areas, and more recently including house wiring, electric appliances, and necessary plumbing. It makes no grants but loans money at 3% on a 20-year amortization.

1933 Tennessee Valley Authority. Created by Congress and mandated for flood control, navigation promotion, and national defense in the Tennessee and Mississippi Valleys, power development from dams so built and used, development of new and improved fertilizers and their complete testing under controlled condition and on farms of practical farmers, soil and water conservation, and the general agricultural and industrial rehabilitation of the area.

1935 Works Progress Administration (The Works Program). Work projects originate with State or local public officials and provide a wide variety of jobs on secondary (including farm-to-market) roads, 11.5%; other highways and streets, 24.7%; public buildings 11.5%; flood control and other

conservation, 5.3%; parks and playgrounds, 12.5%; construction of electric, water, and sewer systems, 9.9%, etc., with funds provided by the Federal agency for unemployment relief.

3. DEPARTMENTAL OBJECTIVES AND THEIR DEVELOPMENT

The development of Departmental objectives has been coincident with the development of the functions and structural trends of the Department. The statutory functions and objectives of the Department, as envisaged by the Congress in 1862, have been given on page 5. The major new objectives characterizing the four successive periods of Departmental development were listed in the table of periods on page 6. What is presented now is in the nature of a clarifying summary.

A. Relation Between Functions and Objectives

There is much confusion of terms and many persons do not distinguish clearly between function and objective. Briefly defined:

Function is an action, activity, or procedure;

Objective is the end, purpose, or goal of activities.

In the light of these definitions, it is clear that the so-called objectives specified by Congress for the Department really were functions or activities, and not objectives at all, except for the mandated diffusion of useful information to the people of the United States. This was the beginning of agricultural education, which became a major objective of the period just ended and still is increasing in scope.

Experience and observation both teach us that agricultural activities or functions usually have been defined earlier and more clearly than objectives. This is natural, in view of our past agricultural history. The addition of new activities often is forced by emergency circumstances rather than developed as the result of planning. The outbreak of a new pest, the problems of settling a new area, the rise of a new economic factor, or the beginning of a new agricultural industry may make many new functions imperative and, in one way or another, the means to start them are found. After such emergency activities have developed long enough, definite objectives will crystallize out of the program of work.

B. The Development of Objectives

As we have just seen, immediate objectives are forced by external circumstances and increase with the development of the resultant activites. Planned objectives are the fruitage of foresight, and foresight, by and large, has not been an outstanding characteristic of America. Only in the present period, when planning is the chief new function or activity, does foresight obtain proper recognition or emphasis. As a result, stabilization, which

requires both foresight and planning, at last becomes the principal new objective of the Department.

It is obvious that major objectives will be made up of aggregates of many immediate or minor objectives. For example, the objective in studying a harmful fungus, insect, economic factor, or trade practice would be its control or elimination and the resulting protection of the crop, animal, structure, or agricultural group injuriously affected. All such immediate protective objectives, and still others, added together, comprised the second major Departmental objective: Protection of American Agriculture, which was dominantly new in the second period, from 1888 to 1912, inclusive. In the same way, the major new objectives of the first three periods, namely, Improvement, Protection, and Education for Agriculture, are the components, in turn, of the present major objective: Stabilization of Agriculture.

It also must be emphasized again that the objectives of any given period do not arise suddenly at the beginning of that period. Their roots are to be found far back in the experiences of the preceding period or periods. On the other hand, the major objective of any given period does not cease to be an objective at the close of that period. Instead, it continues as an increasing objective through all succeeding periods.

C. Present Objectives of the Department

The broad and ultimate objectives of the Department may be stated roughly as follows:

To create, in cooperation with other agencies, both public and private, national, regional, State, and local, a sound and prosperous agriculture as an integrated part of a stabilized national economy, and to produce thereby a permanent and satisfying rural life and environment, these objectives to be achieved through continued progress toward the previous component objectives, namely:

1. Improvement of the quality of crops and livestock and their products, of equipment and structures, and of the soil.

2. Improvement in the methods of production, handling, processing, and disposal of crops and livestock and their products, in the operation of equipment, the utilization of structures, and the handling of the soil.

3. Protection of farm crops and livestock and their products, of equipment and structures, and of the soil, through the control of their diseases and pests and of their physical environment and its effects.

4. Protection of the producer and consumer against unfair and injurious trade practices in the handling, processing, and/or disposal of farm crops and livestock and their products.

5. Organization of the individual farm and home enterprise on the most sound and effective economic and cultural basis, and extension of this effective organization to cover the community, county, State, region, and nation.

6. Planning to effect the wisest and most complete permanent program of conservation and stabilized use of all the natural resources concerned with agriculture, including land, soil, water, vegetative cover, recreation, wildlife, minerals, air, and radiation.

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UNITED STATES DEPARTMENT OF AGRICULTURE

GRADUATE SCHOOL

ECONOMIC OBJECTIVES

The Place of the Department in the American Economic System and the Ideals Toward Which it is Working

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By A. G. Black, Chief,
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Address, Department of Agriculture Auditorium, October 23, 1936.
One of a Special Series of Lectures on Department Objectives
Presented Under the Auspices of the Graduate School

This topic is of extraordinary breadth. Consider the implications of such terms as "economic," and "objectives," and of that challenging compound, "economic objectives". Who is ready and willing and able to define the term, "American Economic System?" And, when the topic refers to "ideals toward which the Department is working," exactly what limitations of time and space - if any - should we recognize?

It seems clear that this topic opens numerous and almost endless vistas for speculation and discussion. But I am just as anxious as you are to avoid the necessity of consulting here and now with the metaphysicists and seekers of the fourth dimension.

We need to plant firmly in our minds this fact - that the Department of Agriculture is not something distinct or apart from the United States. It is, to put it baldly, an institution to do certain work which the United States wants done. It is not a free star. It has its orbit. It reflects what the United States - a convenient term for the mass will of the people - wants done.

It does supply leadership but this is in those fields where it has been directed to supply leadership. In these recent years it has been directed to supply more and more leadership and in fields where not long ago the door was practically closed to departmental leadership and action.

The statutes relating to Departmental work enacted through the years, when taken together, form a broad charter of authority. This charter supplies considerable freedom of action and opportunity for leadership and initiative in seeking stated objectives. These objectives are often stated in very general terms. But the objectives are nevertheless stated - and additional objectives are certain to be stated and restated in the future.

A considerable period of time is often required for public opinion to settle on the establishment of a new objective. The Department does not always sit supinely waiting to be told what to do. It may, in fact, be very impatient to move. But until there is adequate authority to seek an objective, departmental leadership is limited in effectiveness. It may view with alarm - as it long has - the growing problem of tenancy. It is now without adequate authority to deal with this problem. For many years it viewed soil erosion with alarm. Until recent years it was without authority to do very much about it. There are many other instances of this lag between recognized need and action. Consider the time spent in arriving at even a very general objective for agricultural adjustment. Often there is lag arising out of the difficulty of formulating an objective and a policy. But the Department cannot be said to be eternally alert.

It is not strange that the Department occasionally should lag. Most institutions tend to lag in performing that which is expected of them. Human institutions are, after all, very human. But institutions cannot lag behind indefinitely or their usefulness is lost.

The Department's economic objectives today are different than they were in 1900 to the extent that the nation is different and that many of the principal factors affecting its agriculture have changed.

By and large, the trend of agriculture over many years and past the turn of the century was expansionist. The chief problem was to produce more and more for markets capable of absorbing more and more. The nation's population was steadily increasing with a heavy annual inflow of immigrants. Industry was expanding. European markets were growing. The situation was entirely compatible with an expanding agriculture. This expansionist period was not, of course, free from economic problems. But they were not of the kind and character we have faced in these more recent years.

There were then many more alternative opportunities for a farmer whose individual enterprise became unprofitable. He might go west to new lands or he might migrate to industrial centers where employment beckoned.

The work of the Department reflected the economic situation. It concentrated on introducing and improving plants and livestock, on improving cultural practices, on combating insect pests and diseases, on finding short cuts, and on other contributions to productive efficiency.

The Department's economic objectives were part of a universe of expanding agriculture. The Department's responsibility - reflecting the situation of agriculture and the will of the people - was concentrated mainly on improvements in the physical field.

Secretary Wilson served the Department for many years during the close of this era of agricultural expansion. It is interesting to remember his attitude. He told Professor Richard T. Ely quite frankly that he wanted no economics in the Department and he halted certain work that Ely was doing. He gave Henry C. Taylor some advice one day in about

these words: "Henry, you are a young man - some day you will want to get married and be in a position to support a family. Why not give up agricultural economics which will never afford you a livelihood and go into something practical like agricultural chemistry or bacteriology. Then I will give you a job in the Department of Agriculture."

There was a limited place here then for those who were trained in economics. That is not to say that the Department was without an economic viewpoint or without economic objectives. But the problems were different. It is not to be forgotten, however, that one of the first activities undertaken by the Department in the field of agriculture was a phase of economics. In 1839, when Martin Van Buren was president, Congress appropriated $1,000 for gathering crops statistics and for gathering and distributing seeds. The appropriation was administered by the Patent Office. That was the beginning of crop and livestock estimating work which is the backbone of a great deal of economic research today.

Economic research in its present-day sense was very limited through the period of expanding agriculture. But it gradually came to receive increasing attention as the period tapered off. The economic problems of agriculture and departmental objectives were undergoing change after 1900. New objectives would have come forward more quickly except from the coming of the World War.

Had the World War been avoided, American agriculture would have been subjected to acute economic tensions, tensions reflecting its changing character. The acute stages of these were postponed by the war but many of the modern problems were already forcing recognition.

In the period, 1910 to 1914, the cry of "High Cost of Living" was often heard. European agriculture was awakening to the opportunities for technological advancement. Australia, the Argentine, Canada, and other new areas were being exploited agriculturally, offering more and more competition to the United States in the world markets.

Questions concerning the fields of farm credit, standards for farm products, markets and marketing methods, price, and income, attracted increasing attention and became subjects of agitation. Cities made surveys. State legislatures held hearings. Congress sent investigating commissions abroad. As consumers became agitated about living costs, farmers became concerned about the small share they were getting from these protesting consumer dollars. They believed that the farm credit system was not all it might be, and that the distribution system was not functioning in their interest as well as it might.

Up to this time economists in agriculture had been concerned principally with the internal business management of farms. They began to realize that it was as important to get price for what was raised as it was to raise it and that it was important that city consumers be not pushed beyond the point of buying.

Crucial times often produce the men we need, in agriculture as in public life. At about this time a new influence was felt in public life generally and in agriculture particularly. Secretary David F. Houston was not a dirt farmer. He was an economist. He was more. He was a humanitarian. He stimulated activity, pushed new projects - and most importantly stimulated thinking in agriculture from the social and economic standpoint. Under his influence and guidance legislation, funds, and workers were provided to push action programs toward objectives which were less exclusively physical than objectives dominating before his administration.

Then the war diverted much of this thought and energy into emergency work. The war also provided better market outlets and gave most consumers more income to meet mounting costs. Primary economic objectives were set aside for the moment. The rumblings of economic troubles ahead were drowned in the clash of war and new incentives were applied to agriculture in this country to break prairie land and to intensify production.

The Government's interest during the war in increasing our farm production facilitated the development of the land bank system. Federal grain standards came into being in 1916 - demanded by the trade as well as by farmers. Federal cotton standards were promulgated. But farm prices and farm income continued to be relatively satisfactory while production resumed its course of expansion.

Then came the post-war farm collapse of 1920. There was not a corresponding depression in business, you remember. The disparity between the prices farmers paid and the prices they received grew greater than ever before. This collapse with all the inequities it brought in its wake, stimulated the development of agricultural economics in the modern sense. Acreage had been greatly expanded and land use had been intensified. Demand for farm products fell off sharply and abruptly. Economists who had devoted themselves to the internal business problems of a farm saw that they were limited in getting results by factors that were applicable to all farms. And economists began turning to the common problems of groups of farms. Farmers demanded it of them. And eventually the Department, in another reorganization and enlargement of its economic work began to reflect this change.

But even with the expansion of its economic work, departmental and governmental farm policy was slow - it lagged - in reflecting the changed situation in agriculture. It was fortunate, as we have since seen, that the economic work of the Department was then re-focused and enlarged. The research and cerebral activity of the period 1920 to 1930 was not wasted. It was piling up plenty unto the day of need ahead.

The development of the Bureau of Agricultural Economics and the expansion of economic research and teaching in the land grant colleges was stimulated by farmers and their organizations, which were experiencing a new period of growth arising from the economic pressure on agriculture. The farm conference called by Secretaries Henry C. Wallace and Herbert Hoover in 1922 laid its greatest emphasis on economic research and the

distribution of farm economic information particularly as it concerns distribution.

In the days when the Department was mainly concerned with improvements of a physical character, it was confidently expected that the adoption and use of Department discoveries would come about gradually through education. Extension work had received limited encouragement for many years prior to 1914. The passage of the Agricultural Extension Act prepared the way for better things. But it was the World War that taught us how the processes of education could be speeded up and how greatly the lag between discovery and use might be shortened.

When the Department's economic work was expanded, it was natural that there should be some over-estimating of results to be achieved by distributing the products of farm economic research through conventional channels - bulletins, extension lectures, press information, and short courses. An attempt to improve the distribution was made with the establishment of the Outlook meetings and reports. This plan relied upon the principle of bringing to the farmer more precise production and price information on the theory that, given the information, the farmer would use it. Farmers necessarily make forecasts each time they make a plan. They need adequate and digested facts as a basis. There is reason to expand this important work - but we have learned that the adjustments facing farmers as a group cannot be accomplished by the Outlook Service alone.

The situation that developed in agriculture during the 'Twenties, climaxing in widespread farm distress in the early 'Thirties, does not require retelling here. Nor do I need to review our present vigorous programs and the action based on them.

But it is interesting to remember that, although the economic contributions of the Department were important, the inspiration or impetus for programs of economic action came from outside and not from within the Department. The Department reflected; it studied and investigated; it collected and digested facts. It stood ready to do any job asked of it. It was doing many a good job. But its economic objectives in terms of concrete action were set for it - not by it.

But I do not want to leave the impression that the Department in this respect has been merely clay finding form in a mould suddenly cast up by public opinion. It is interesting to trace how the Department in its economic fact-finding and research has contributed to enlightening public opinion, how it has contributed to the public's sum total of intelligent appreciation of economic factors involved in all farming.

In the language of the philosopher, it has contributed to the establishment of a frame of reference.

The free flow of economic facts and information from the Department to farms and farmers, and the returning tide of unsolved problems, individual and group dilemmas, has been a healthy two-way current. It

clearly points to this: that the Department's economic objectives will be the economic objectives of those whom the Department seeks to serve. But the Department must contribute to the evolution of these objectives by continuing to supply a flow of facts and research conclusions which will serve the useful function of supplying a frame of reference.

Since the Department has undertaken active programs in response to the will of the people, it has the obligation of eternally lighting the way to a fuller understanding of the purposes of these programs, their economic background, and their economic and social implications - good and bad. Today it is encouraging the establishment of county planning units and of rural discussion groups. Both are contributions to improved understanding by the farmers and their families of the economic and social forces that affect them.

One part of my topic - "the place of the Department in the American Economic System", mystifies me somewhat. The Department's activities cannot very well be disassociated from the American economic system - whatever that system may be at any particular time.

We are fond of thinking that the economic system operated long and successfully upon the principle of automatic adjustment. Now that we are less frequently given to praising automatic adjustment, we begin to see that we have never had automatic adjustment throughout the economic system. We have had to rely upon it in some parts of the agricultural industry, but we now recognize that farmers have not functioned in a world of automatic adjustment. And farmers have been among the first to demand change from what passed for but actually was not automatic adjustment.

Consider the field of transportation rates, where favoritism and vicious practices of many kinds had made difficult the movement of farm produce. Farmers led the fight for establishment of the Interstate Commerce Commission. They were in the forefront of the struggle for anit-trust legislation, for modifications in the banking system. They have never been quite willing to approve what passed as automatic adjustment except in the field of their own efforts as competitors. And with expansion of agriculture such as we saw in the 19th century now passed and gone, they are leaning more and more in the direction of modifying this competition in ways that will result in greater social gain.

Change and adjustment are as characteristic of agriculture as the movement of the seasons. Even as farmers are seeing that there is much to be gained from some modification of the cut-throat competition that prevailed in agriculture in 1930, 1931, and 1932, so they too are seeing that they cannot erect permanent barriers to change and adjustment. And they do not want to erect such barriers. But they do favor aiding the processes of change and adjustment in ways that will make them the healthy, valuable influences they should be.

The long search for a cotton-picker appears not to have come to an end, despite the impressive demonstrations this fall. It is not yet a satisfactory machine. Whether a highly successful picker will be developed

in a year or a few years remains to be seen. But it may be profoundly significant that, this year, discussion has not centered alone upon the mechanical merits of a picker or its potential contribution to lowering production costs. Farmers, economists, and the public generally have been discussing and speculating as to the social consequences of a successful, low-cost picker.

Would this concern with social consequences have been evident if the picker had come upon the scene in 1850 or 1875 or 1900? I doubt it. I believe that there is more awareness of the social and economic implications of agricultural change than ever before. That the Department has contributed to this awareness is a sign of intelligent, civilized alertness to the human factor.

It seems to me that to aid change and adjustment, whatever they may be, so that they serve the greatest social ends is a key economic objective of the Department today. The Department seeks to contribute to economic balance - to shorten and eliminate, whenever possible, those periods of economic unbalance in regard to agriculture when the situation is much the same as when a man, injured by accident or design, reels, stumbles, and moves on helplessly until the sense of equilibrium returns.

As our faith in automatic adjustment has lessened - as belief that man is an automaton in an automatic world has faded - we have come to see that man is capable of conscious adjustment. In other words, men can control their temporal destiny. This is not a new faith for man, the individual. It is not a new faith for men banded together in armies. But it is a relatively new faith - an heresy in many quarters - for men engaged in agriculture and joined by other bonds, of love of land, of husbandry, and open skies.

Why has this faith been so slow in awakening in groups of men on farms who pride themselves as individuals, as few men do, in their ability to meet and conquer nature through the days of every year?

It seems to me this goes back to the fact that man has learned that to live he cannot surrender to physical destiny - that he can and must test and increase his strength and thus improve his chances to meet the physical challenge.

But to meet the economic challenge to groups of men - that did not seem so necessary, or so possible to understand, or to do, because groups - not one person alone - were involved. Men now see that they can unite in economic and social effort. They are no longer willing to leave their economic and social future to the whims of destiny - or to a few men who stand to profit from their weakness or indifference.

Thus the farmer's concept of his place in the economic system is changing. And like the farmers, the Department is meeting a challenge to change and adjustment, for it must adapt itself to man's changing concept.

The last part of my topic refers to "ideals toward which the Department is working".

I imagine there are as many answers to the question of ideals as there are individuals working in the Department. We can never be certain of the sum of these, for there is no process of adding up immediately the ideals or the aspirations of large numbers of individuals. History succeeds more readily, for it can consult the record.

The Department is not a free agent. To a very large extent its course is laid down by statute, by appropriation measures, and by tradition. But on several occasions Congress has made its view clear on one point - that it shall be a function of the Government to seek economic equality for agriculture with other groups. It must be recognized that the Department has an obligation that is not narrowly occupational. It has primarily a responsibility to the welfare of the nation as a whole. But the welfare of the nation as a whole may be again, as it was in 1932, to seek equality for agriculture as a fundamental step in the direction of serving the general welfare of all groups.

The work of the Department falls into several classifications that reflect economic objectives of a somewhat varied character.

The many activities looking towards scientific discovery and technological advance are geared to a hope that costs may be reduced. It has been a field of great accomplishment with effects gradually felt by producers and consumers.

Grades and standardization work has three very definite objectives. First, to promote freedom of trade by establishing a common language of terms of measurement of the desirability of farm products for various purposes. Second, to help producers through having the quality of their products more accurately reflected to them in terms of price and income. Third, to protect consumers, who when satisfied with the character and quality of what they buy usually tend to consume more.

In the Department's regulatory work, it seeks to improve trade practices and to stamp out dishonest and unfair practices of economic disadvantage to producers and consumers alike.

In its economic service work, including market news reporting and crop and livestock estimating, in the spread and distribution of economic information generally, the Department seeks to help the producer to plan intelligently. The farmer today has information on supplies, on demand, on prices, on rainfall and growing conditions that make possible intelligent adjustments in farm programs. This work protects producers and consumers against false information circulated by selfish interests.

In marketing and certain other economic research and service work an objective is to reduce the burden of distribution costs. In this as in various activities directed towards finding new and additional uses for farm products the objective is that of expanding markets and consumption.

In much of the work of soil conservation, of the Forest Service, and of Biological Survey the economic objective is broadly that of husbanding

natural resources in such ways that they will yield a continuing supply of food, clothing, forest products, and wildlife for future generations.

And throughout the Department, in more aggressive ways in recent years than ever before, is the objective of improving and stabilizing farm income and national income. These objectives are in the national interest and in harmony with that basic departmental objective, to help agriculture advance its living standards to more and more satisfactory levels.

Agriculture is a means of livelihood for more than a fourth of the people in this country. It has the responsibility of supplying raw materials for food, clothing and shelter, in sufficient quantity, of good quality, regularly and at reasonable cost for all the people in this country.

In a society based upon ideals of freedom, justice and democracy, it must be recognized that the well-being of persons engaged in agriculture should compare well and favorably with the well-being potentially available to those engaged in other enterprises that require comparable investments of capital, labor, and intelligence. It must be recognized that this large agricultural group is entitled to equal opportunities for securing and maintaining an environment that is favorable to the development of intelligence, wide interests, and well-being.

In conclusion, let us examine briefly what seems to many students of this period to point a significant trend affecting the future. We have seen the trend towards conscious policies in every field of economic activity. The question which many people are asking today is whether we can have a coherent and working economy without conscious policies. And policies imply objectives - conscious economic objectives.

The trend towards conscious policies and conscious objectives seems to me to be unmistakable. The development of civilization on a pattern of increasing complexity demands it. And agriculture cannot fall behind without tensions which eventually would become unbearable. Thus agriculture is becoming and is likely to become increasingly a part of this movement towards conscious goals. This means planning. And it means action programs in the future - perhaps many more of them than we now might anticipate. History is filled with the tragedies of man's unrealized possibilities. Agriculture will share with other groups a determination to make the history of the future less tragic - to improve upon the past.

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THE ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE — AS A MEANS OF CARRYING OUT OBJECTIVES

Talk by M. S. Eisenhower, Director of Information, in the Graduate School Series on Department Objectives, October 30, 1936

The organization of this Department is not something that can be readily sketched on paper. It is an intricate, complicated thing that no one speech can deal with adequately. My object is simply to indicate what seem to me to be some of the fundamental principles involved and to show how the organization of the Department contributes to the accomplishment of the Department's objectives.

Naturally, I cannot cover the whole field. The Department exists to promote not merely the interests of farmers but of consumers, manufacturers, and other groups. Indeed, it may be said that all of the Department's activities are in the interest of the general welfare and none exclusively in the interest of agricultural welfare. The results of research that enable farmers to lower production costs, for example, benefit producers and consumers alike.

But I want to deal mainly with the agricultural implications of the Department's work. Furthermore, I shall restrict my remarks still further and confine them to three main branches of the Department's organizational problem as it affects agriculture; namely, (1) to research; (2) to the "action" programs that are the synthesis of research findings; and (3) to agricultural policies requiring interbureau coordination. Finally, I shall attempt to show, in the briefest sort of way, that though the organization we now have answers most of

its purposes well, it is not the only type of organization conceivable. I mention alternatives not because they appeal to me personally, but because they may stimulate you to think, from time to time, more critically about the problem in general.

The Magnitude of the Problem

In this discussion I view organization not only as the divisions and bureaus into which are placed the employees directly on the payroll, but as the cooperative structure which includes this Department's tie-up with the State agricultural agencies, with county associations of farmers, and with literally hundreds of scientific, economic, and other associations. Also, I view organization as more than the cooperative framework or structure. It is a combination of structure, policy, procedure, and administration. We, our work, and our relationships are the organization.

Now, first, I think it will be helpful to consider for just a moment the magnitude of the organization problem. We now have in the Department nearly 55,000 regular employees. In addition, at certain seasons of the year, we have more than that number of temporary employees. About 11,000 are here in Washington; the others are stationed at 1,481 field locations.

Each of these 55,000 employees is participating, in one capacity or another, in activities which may be divided, roughly, into 7 general classes: (1) Research; (2) Extension and Information; (3) Eradication or Control of Plant and Animal Diseases and Pests; (4) Service Activities, such as Weather and Crop Reporting; (5) The Administration of Regu-

latory Laws; (6) Road Construction; and (7) The most recent one — the administration of action programs. These activities or functions are closely interrelated and interdependent. Research, for example, is not complete in itself. Knowledge gained must be communicated to the public. It must be used in eradicating plant and animal pests. It must be incorporated in regulatory law administration. It is also the very foundation of the action programs.

The administration of these seven activities is lodged in 23 bureaus and offices, all of which are responsible to the Secretary. Some bureaus are interested primarily in research and the dissemination of research results. Other bureaus are interested in as many as four or five of the general functions of the Department.

The Tests of Good Organization

To determine, critically and fairly, whether the organization as it exists today is competent to meet its manifold responsibilities, we must make our examination by categories. An institution might be organized efficiently for research and, at the same time, be deficient for the administration of regulatory laws or for the administration of action programs. In promoting any of these ends, there seem to be at least four primary requirements.

First, there must be centralization of policy coupled with decentralization of operations. Needless to say, policies must be uniform, non-conflicting, and sound in principle. They cannot have that character if different officials may improvise them at will. This is so obvious that I need not particularize the point. But it is important to bear in

mind that centralization of policy is quite consistent with decentralization of operations, and that centralization of fundamental policies does not prevent intelligent modifications to suit specific conditions.

Second, good organization requires smoothly functioning routines and procedures that yield accuracy and speed in the handling of a multitude of problems. A far-flung institution cannot be reduced to confusion every time a problem is presented for solution. It is important, of course, not to permit smoothly functioning routines to become mere ruts; not to permit important new problems to receive only routine consideration. Here the ability of the administrator is indispensable. He can go wrong in either direction. Innovations that are not needed are bad, but to resist innovation where it is needed is equally bad.

Third, organization should be considered an instrument for promoting social and national welfare rather than something capable of being judged simply from the standpoint of its mechanical efficiency. A smoothly operating machine has great fascination and its smoothness of operation may come to be valued above the object for which the machine exists. Each part of the administrative machine stands in a necessary relation to all the other parts; the harmonious interaction of the various research and service units in the Department depends upon the degree to which the organization as a whole has come into adaptation to its entire social function. Here the real requirement is that administrators be provided the opportunity to keep closely in touch with all significant developments that lead to the formation of fundamental policies.

Fourth, – a combination of the previous three – the organization must be such that it may efficiently serve those whom it was set up to serve. Certain branches of the Department's work would fail completely were they not carried ultimately to the farmers through a network of Federal, State, and local administrative agencies.

Research Organization

So, let us examine one class of work – research – in the light of these four standards.

In research, the problem is to combine teamwork with individual initiative, and to maintain a proper balance between studies for more or less immediate, practical objectives, and fundamental research for the discovery of basic facts and principles. The first type of research may be undertaken, when the methods are known, to throw up a hurried defense against diseases and pests, to develop plant varieties or strains of livestock suited to particular conditions, or to find new uses for crop byproducts. The second provides new and more effective methods for accomplishing the first. Fundamental research explores physical and biological phenomena not only to increase the sum of knowledge, but to discover the principles that must be known before certain specified problems can be solved. While some scientists may devote most of their time to fundamental research, and others to so-called practical research, the same principle of organization governs for both.

What is this principle? Research is organized partly on a science, or functional, basis, and partly on a commodity basis. This is true of research bureaus, divisions, sections, and units. The Bureaus

of Plant Industry, Animal Industry, and Dairy Industry are commodity bureaus, in the broad sense. The Bureau of Chemistry and Soils and the Bureau of Entomology and Plant Quarantine are science or functional bureaus. Within all research bureaus, the divisions are organized on both commodity and science lines. In the Bureau of Plant Industry, the Division of Cereal Crops and Diseases is organized on broad commodity lines, with sections devoted to single commodities — wheat, oats, barley. In the same bureau are science divisions: Nematology, Soil Microbiology. In the Bureau of Animal Industry are both science and commodity divisions in research: Pathological Division, Biochemic, Zoological; but, on the other hand: the Animal Husbandry Division. The same is true of sections. Within the Animal Husbandry Division are these commodity sections: Beef and Dual-Purpose Cattle, Swine, Poultry; on the other hand, science sections: Genetics, Nutrition.

This may at first appear to be a general hodge-podge. But there is a simple, definite underlying principle here. Research bureaus and all divisions and subdivisions within are organized so as efficiently and accurately to solve problems. The problem is the focal point of the unit. Related problems are the nucleus of the sections. Sections are grouped administratively into divisions which, again, are organized to solve problems. One problem may be studied most effectively by enzymologists working together on many different commodities; another by having entomologists concentrate on cotton-insect investigations. The character, the importance, and the magnitude of the problem on one hand, and the scientific technics which

must be applied to that problem on the other hand, determine the specific research set-up.

This is a real virtue. So long as the problem is the basis of research organization, we may be assured that changes will be made whenever necessary to meet the new problems presented to the Department for solution.

If research is to be fruitful, scientists must be permitted truly to search. They cannot be constantly harassed by the thousand and one official matters that are extraneous to research. This does not mean that scientists must be cloistered, insulated from all reality. Quite the contrary. Organization lines in research, after all, are only administrative conveniences. Science knows no boundaries, structural or political. There must be constant cooperation between those who handle different segments of broad problems -- between chemists, entomologists, pathologists, pomologists. I need not detail here the many facilities for cooperation and consultation in agricultural research.

Scientists must be located so that they may come to grips most effectively with the real problems. Some problems are best handled in a central laboratory; others, in the field. A small part of the Department's research staff is in Washington. The larger part is located at about 375 field research stations or locations throughout the United States and Insular possessions.

The Department's research organization is roughly similar to that of the State agricultural agencies. The lines of cooperation between our research people and those of the States are of long standing.

State research, financed in part by Federal funds, is coordinated with that of the Department through the Office of Experiment Stations; research within the Department is coordinated by the Director of Research, who is also the Chief of the Office of Experiment Stations. This cooperative system works so well that it is usually taken for granted. Both the Department and the State stations carry on fundamental research. In the field of so-called practical research, the Department usually tackles interstate, regional, and national problems; the State institutions tackle those problems most acute within their borders. The two are complementary. There is little, if any, duplication; little, if any, waste of money. Certainly in research we have centralization of policy and decentralization of operations.

A relatively new procedure in Federal-State research was inaugurated under the Bankhead-Jones Act, passed last year. That Act authorized, among other things, the establishment of regional research laboratories. The new soybean-utilization laboratory is a good example of the principle involved. It is located in Illinois, but is not a State institution. Twelve States are cooperating in planning the work of this laboratory and are adjusting the work at their stations so that the total research effort is a unified one. In effect, here is a pooling of the research genius of the Department and of 12 State institutions in tackling a single agricultural problem. The inauguration of this new procedure, to solve an important agricultural problem, has caused no dislocations, no commotion in the research organization. It has now become a smoothly-functioning procedure. It serves to illustrate

a similar quality in the entire research organization. Problems are presented. They are broken down into definite classifications. Scientists begin their research, and they find the solution. Even those of us who live next door to the research staff of the Department cannot help but be thrilled by a review of some of the research victories. Department scientists discovered the secret of microbial-disease transmission and thus made possible the conquering of yellow, malaria, typhus, and Rocky Mountain fevers. They saved the hog industry, threatened by cholera. They developed an effective remedy for hookworm in humans, vastly extended the shipping range of citrus fruits, rehabilitated the disease-threatened sugar-cane industry, and found uses for numerous farm byproducts. They developed new varieties of plants and introduced foreign varieties so as better to utilize our land resources. Only three weeks ago the Department announced a new method of concentrating and freezing milk, thus making it possible to ship whole milk to areas which previously could not get it. Seldom a day passes that there does not come to my desk a manuscript, radio talk, or press release announcing some new research discovery; soon it goes on its way, becomes common knowledge, and benefits all the people. And, incidentally, the first world survey for superior germ plasm of plants and animals, and the preparation and printing of a 1200-page Yearbook on genetics — all in less than 2 years, and done in addition to the regular work — could not have been accomplished by an agency that became confused every time it was presented with a major job.

Those who supervise research have the usual opportunities to be intimately familiar with important trends in agriculture, industry, and our national life in general, and thus to keep their research programs adapted to current needs. They also have considerable opportunity to consider their parts of the machine in relation to all other parts. Mutual consideration of problems is a prime development of the present period. The Department now has about 350 inter-departmental, inter-bureau, and intra-bureau committees. One is the cotton research committee. Research affecting the cotton industry is conducted in 8 or 9 divisions of four different bureaus. The cotton committee brings this work into focus, discusses problems and needs, and critically reviews the details of the research program. This is good. However, I think another step is necessary. If we recognize that research administrators must always keep in mind the incalculable social implications of their work, we must also recognize that sound Department policies must be based upon the experience gained in managing that socially-important work. Therefore I think that regular meetings of bureau chiefs with the Secretary and his staff, meetings in which the broader policy questions were brought up for discussion and criticism, would be helpful. An administrator whose agency is responsible for scientific work in soils is profoundly interested in all land-use policies, even in those not of a scientific character, such as the question of what share of the cost the Federal Government should bear in land-use operations on privately-owned land.

The final question regarding the research organization is whether it is such that research efficiently serves the people it is expected to serve. Doctor Warburton answered this question in the opening discussion of this Graduate School series. It is the job of the extension and information forces to convey the knowledge developed by research accurately, intelligibly, and in sufficient volume to those who need it.

Action Programs: the Synthesis of Research

Now, in examining the organization of a second broad field of Department activity -- action programs -- I wish to use a different approach. For research, I attempted to show definitely that certain specific requirements of good organization are adhered to. Here, I wish to tell you, probably in an over-simplified way, about some of the very practical organization problems that had to be solved, and solved quickly, when an enormously expanded responsibility was placed upon the Department. You will agree, I think, that those same sound principles were followed, but I shall not detail them categorically. I shall stress more particularly how the form of organization contributes to the achievement of objectives.

If I devote considerable time to the Soil Conservation Service, I do so for two reasons: (1) This series of lectures has stressed that henceforth the action programs will require more and more attention; (2) the problems involved in the organization of the Soil Conservation Service have inter-bureau -- indeed, national -- implications.

Here we see the interdependence of different types of agricultural activity. Research, education, service, and operations are all harmonious parts of a unified policy. Soil conservation requires this

synthesis. It requires inter-bureau, inter-departmental, and Federal-State coordination. It requires a special relationship of the Department to the individual farmer.

The first question in organization the Department faced when the Soil Conservation Service came to it in 1935 was this: Should the function of controlling erosion be assigned to an existing agency, or should a new one be established? The latter choice was made, for many reasons. Soil and water losses had become so acute that corrective action had to be the primary function of some agency -- not merely a secondary duty of another primary activity. Further, soil conservation involves in one way or another the work of practically every bureau of the Department, and of the State experiment stations and extension services. Control is an integration of many specialties -- agronomy, forestry, soils, engineering, and the like -- into sound farm-management plans, farm by farm and watershed by watershed. Consequently, no matter what agency undertook the work it would, in effect, have become a new agency. Third, the program involved actual work on the land, financed by Federal funds. It involved the use of relief labor in applying engineering and vegetative methods of control. The bureaus of the Department and the State agencies have not heretofore done this type of work on private agricultural land. It is more nearly comparable to that done by the Forest Service and the Bureau of Biological Survey on publicly-owned land.

So the Soil Conservation Service was established as one of the major, permanent bureaus of the Department, and the activities of other bureaus that had a direct bearing on soil erosion research and control were transferred to it.

The next important question was one of scope. Since soil conservation does involve most of the agricultural sciences and practices, should the Soil Conservation Service depend upon the existing research bureaus for much of its fundamental information, or should it be set up as a fairly self-sufficient unit? For example, if new drought-resisting plants were needed in a given area to control erosion, should the Bureau of Plant Industry bring in new plants from abroad, select the most promising, breed and develop them, and turn the results over to the Soil Conservation Service, or should that agency perform this work for itself?

Now, duplication is not a bad thing, per se. We do not cry "duplication!" merely because all bureaus employ typewriters, logic, and higher mathematics in performing their work. These are tools, not organization monopolies. But quite properly we avoid duplication in fundamental fields, for very practical reasons. Duplication here results in inconsistencies, inaccuracies, confusion, and higher costs. Then, when the results of fundamental work are known, they become the tools of all.

If the Soil Conservation Service were to become fairly self-sufficient in research, it would have to duplicate a good share of the research now being conducted in the Department. It would be a Department itself, with studies ranging from livestock management, grazing, and the like, to plant breeding, economics, and fundamental soil analysis and classification.

It was therefore determined that the Soil Conservation Service should conduct research directly applicable to soil erosion and its

control, but that it should depend upon the other bureaus for research indirectly related to erosion and its control. Thus, it would perform all research on the effect of vegetative cover on run-off, the construction of terraces and dams, and the use of strip-crops of varying widths in controlling erosion. It would depend on the Bureau of Plant Industry for fundamental information on cultural practices, on the Bureau of Agricultural Economics for basic studies in farm management and rural life, on the Bureau of Chemistry and Soils for soil classification and correlation, and so on. These research studies, while yielding information vital to erosion control, have much broader implications and uses. Memoranda of understanding were entered into by the Soil Conservation Service with six of the other bureaus and thus all the resources of the Department are available to it.

A problem of jurisdiction came up. The Forest Service, in managing forest lands for manifold purposes, is actually doing erosion-control work. Here, control is the result of proper forest management. How should the two agencies avoid duplication and misunderstanding?

We have in the United States three great classes of land: Forest, farm, and grazing land. Each of these involves three classes of ownership – Federal, State, and private. I cannot take time to give you all the fine distinctions but, roughly, for erosion control, the Forest Service was assigned jurisdiction over national forest lands and over all privately owned lands predominantly forest in character. The Soil Conservation Service was assigned lands in farms, most of which, of course, are privately owned. Much of the grazing land is publicly owned

and is under the jurisdiction of the Department of the Interior. For control work on such land, the Soil Conservation Service was authorized to enter into cooperative agreements with the proper administrative agency. The Soil Conservation Service, the Bureau of Indian Affairs, and the Grazing Administration threw aside all barriers to enter into workable, cooperative programs for the control of erosion on great areas in the West.

There were many problems, too, of internal organization. I shall mention only one. The Soil Conservation Service realized that with less than 10 percent of its funds devoted to research, there was danger that its research might suffer in behalf of operations. Therefore, all research was organized into a single division, with necessary sections and units. Separate lines of authority were carried down to research in the field, which was put on a cooperative basis with the State experiment stations. Research was amply protected but administrative arrangements were made to keep both the long- and short-time research responsive to the needs of the control program.

Now, look toward the field. Out in the country, the operations program of the Soil Conservation Service includes the establishment and maintenance of watershed demonstration projects. At present more than 150 of these are under way. Those involving private agricultural land average about 25,000 acres each. Also the Service has about 450 CCC camps doing erosion control work, about 330 of which are located on private agricultural land <u>outside</u> the demonstration projects. And, finally, it wishes to make available to everyone who tills the soil

every shred of information he can use in controlling erosion on his land. These are the same farmers, on the same farms, who are reached day in and day out by the State agricultural agencies. Often, the State agencies are better informed on the agricultural practices of a single State than are most of us in the Department of Agriculture.

This clearly called for the pooling of Federal and State information and experience in actually controlling erosion within the State. Cooperative agreements were entered into with the State extension services and experiment stations. In each State, an Advisory Committee was established, the nucleus of which is the State Director of Extension, the Director of the State Experiment Station, and the State Coordinator of the Soil Conservation Service. This Committee is advisory to the Soil Conservation Service in formulating and prosecuting the State program.

Next, the United States was divided into eleven regions. The boundaries of each region roughly enclose an area of similar erosion problems. I shall return to this question of regionalization later. Suffice it here to say that the regional office of the Soil Conservation Service is concerned with technical inspection to guarantee uniformly sound control practices, with procurement, fiscal matters, and the like.

And so we come to the question of organization in the local community, affecting the individual farmer. It is apparent that the Federal government cannot manage erosion-control operations directly on six and a quarter million farms. There aren't enough trained soils men, agronomists, and soil conservationists in the United States to

permit an individual, farm by farm program. Local group responsibility is essential. This can be obtained through soil-conservation associations, permanent in character, and legally empowered to obtain compliance in a control program which is carefully considered and democratically decided upon by the farmers themselves. But it takes time for States to draw up and pass laws, so the Soil Conservation Service required the formation of voluntary associations which would develop local responsibility; and it announced that after July 1, 1937 new work would be started only in cooperation with legally constituted associations.

More than 400 voluntary soil-conservation associations were organized last year and are now functioning. To date only one State, Texas, has enacted legislation providing for legally constituted districts.

Incidentally, under the Soil Conservation and Domestic Allotment Act farmers have organized 2,760 local associations to handle the local administration of that Act.

This development is, I think, one of the most significant in the modern agricultural structure. Local responsibility, with the Department helping farmers to help themselves, is our traditional approach. Here is a new opportunity in keeping with that philosophy. I believe these associations will do more than accomplish their major purpose. They will provide rural people the machinery through which they may develop a thoughtful, influential local leadership. They are going to play a powerful part in all the social, economic, and physical phases of farm readjustments, as farmers gradually overcome the old exploitive methods of farming and adopt conservation methods.

In this series of talks, we have been considering Department objectives. I should like to say, parenthetically, what I think is the farmer's new objective. He sees the frontier gone. He must now produce with what he has. The foreign market is not taking all the surpluses he is capable of producing. His young people are wondering whether opportunities elsewhere than in farming are not more restricted than they once were. They are wondering, too, whether the old practice of draining the surplus wealth from the country to the city, leaving rural life barren, is really the way to achieve security and a better standard of life. And so he, like farmers in older countries were long ago forced to do, is beginning to think in terms of continuous production; that, in turn, leads to thinking in terms of a richer, not a more barren countryside; and in terms of the social and physical changes this implies. He once scorned the woodlot because it takes so many years to grow a tree. Now he is deciding that he cannot afford not to plant the tree, for it will save the soil today and will be an asset to his son.

At your leisure you might apply those four pragmatic tests of efficient organization. Is the Soil Conservation Service so organized as to facilitate: (1) Centralization of policy and decentralization of operations; (2) smoothly functioning routines in handling a great multitude of tasks; (3) a broad, social view on the part of administrative officials; (4) efficiently serving those whom it is expected to serve? You may also wish to apply other tests of your own: Is there needless duplication? Is there effective cooperation? Is there any significant departure from the traditional democratic relationships?

Coordination of Inter-bureau Policies and Procedures

We have so far considered two broad fields of activity. I should now like to turn to several "over-all" problems in organization — problems that cut across bureau lines.

Regular procedures exist for coordinating much of the work affecting all bureaus. The financial, personnel, legal, extension, research, and information work are coordinated by the five Directors and the Solicitor. It may be that the new action programs, which stress land-use planning and which affect the work of many bureaus, will necessitate additional facilities for coordination. To make this problem specific, consider a new responsibility — flood control.

The Flood Control Act of 1936 sets up a new national policy on flood control by establishing work on land as coordinate with work on rivers. The Department of Agriculture is assigned the responsibility for work on land; the War Department for work on rivers. Briefly, the Department is called upon to survey certain specified watersheds and then to submit to the Congress a report on each, indicating the proper methods of control and indicating also whether the benefits to be derived will be greater than the cost of control.

The development of each master plan will involve many of the bureaus of the Department. The two most vitally concerned will be the Forest Service and the Soil Conservation Service. But the Bureau of Agricultural Economics will be concerned in the complex economic problems involved. The Bureaus of Agricultural Engineering, Biological Survey, and others will inevitably be drawn into the program. Success

will require not only the use of all the technical resources of this Department; certain studies will require also the cooperation of agencies outside the Department – notably the War Department and the National Resources Committee.

No single existing agency of the Department can accept the total responsibility for the flood-control program. And yet we must have uniform policies and smoothly functioning procedures in the preparation of these highly important land-use plans. One method of meeting such a situation would be to establish in the Secretary's Office an Office of Land Use; one of its duties would be to coordinate flood-control activities. The Office of Land Use would not be an operating agency. Existing agencies would perform most of the technical and control work, but the central office would form the basic policies, allocate funds, correlate the work between bureaus, and represent the Department in flood-control and other comprehensive land-use matters before the Congress, the Bureau of the Budget, and other Federal agencies.

This problem of "over-all" coordination requires serious study. It seems evident that we have passed permanently from the simpler days when the major responsibilities of the Department were limited to research and education. Those functions are more important than ever. But the Department for years to come will also have important planning and action programs to administer. Gradual changes in organization will no doubt have to be made so that the Department may meet its new responsibilities promptly and effectively.

I believe the Department must also give close attention to the problem of regionalization. Regionalization is essential for effective administration in a highly decentralized organization, and to achieve proper modifications in over-all policies in view of the varying climatic, soil, geomorphologic, and vegetative conditions, in the United States. Six bureaus of the Department have established administrative regions. So have many other Federal agencies. The regions of one agency do not coincide with those of another. It is natural that they should not. Forest regions are determined by the problems presented in the administration of publicly owned lands. Soil conservation regions are determined by the physical problems of controlling erosion – largely on privately owned lands. The two sets of regions could not be identical. Even so, I think the Department must develop simple routines that will facilitate cooperation between agencies within the different regions. Again, an illustration:

The Soil Conservation Service in carrying on work on a demonstration project may find a small hilly area of 5,000 acres in such bad physical condition that it should be taken out of cultivation. It may be too small and too isolated from the larger forest areas to justify its administration as a national forest. But it could become a splendid community forest. Some of the farmers now in the area could be given permanent employment in building and maintaining trails and facilities, and in protecting the area from fire. You see what we now have – a small project in which the Soil Conservation Service, the Resettlement Administration, and the Forest Service are interested. So are several State

agencies. The simplest way to handle such a problem is to have cooperation between officials in the field. One agency must assume the primary responsibility for the project, but it must have the cooperation of the others. If the regional officials will get together on the ground and jointly make a recommendation, it will result in action much faster than each assuming that somehow, sometime, someone in Washington will bring the heads of the various agencies together for consultation and decision.

The question of regionalization is rather touchy. We have had regions for many years, but they did not excite unfavorable comment because the lands involved were largely publicly owned. But when regions were formed in agricultural areas, some people contended that the regional set-up implied a reduction in the responsibility of State agricultural agencies and an increase in regional and Federal responsibility. The Department's view is quite different. The Department believes in decentralization. It views regionalization as a decentralization of Washington functions, thus bringing the work of the Department closer to the States. This should result in greater, not less, State responsibility. Merely because the Department organizes to help attack the wind-erosion problem as a single project, does not imply a reduction in the responsibilities of the five States mainly affected by wind erosion.

Alternatives in Organization

Now, I hope I have succeeded in giving you a broad view of the organization of the Department. Here are parts dedicated to the discovery of fundamental information; other parts to the administration of

educational, regulatory, and action programs. The fact-finding agencies are organized on a science, or functional, and a commodity basis. Regulatory work is handled in both types of organizations. The action agencies are organized on a functional basis. They are all interdependent.

If this isn't the proper basis of organization, what is the alternative? Some contend that all branches of the Department should be reorganized on a commodity basis — that we should have a wheat bureau, a cotton bureau, a tobacco bureau, and so on. In each should be placed the research, regulatory, educational, and other work pertaining to that commodity. They believe that the Department cannot, for example, serve the wheat farmer as effectively as it should, when the work on wheat is lodged in many different divisions of different bureaus.

The complete and outright commodity segregation no doubt has many alluring possibilities. But it would result in some peculiar situations. Each commodity bureau would have to have a crop-reporting service, an engineering unit, a unit for fertilizer investigations, another for insect and disease studies, another for soil investigations, and so on. For research, we would have many more bureaus than we have now, with the scientific specialties duplicated in each. The Bureau of Animal Industry, for example, would have to be divided into a bureau of livestock, perhaps a bureau of poultry, and a bureau of hogs. Zoological, biochemical, and pathological research, now unified, would have to be disrupted and conducted separately in each.

In regulatory work, pink bollworm activities would have to be lodged in the cotton bureau, corn-borer control in the corn bureau, and

phony peach disease eradication in the fruit and vegetable bureau. Such a segregation might be possible, but there are other complications: Port and border inspectors prevent the entry into the United States of all dangerous plant and insect pests. Would they be subdivided in accordance with the commodities usually attacked by such pests?

Action programs, such as soil-erosion control with its land-use approach, simply could not be handled on a commodity basis.

Fundamentally, the question is whether with a given amount of money entomologists, chemists, soil specialists, economists, engineers, zoologists, pathologists, administrators, statisticians, lawyers, will produce greater returns for agriculture year in and year out if they are arbitrarily put into commodity groups, or if they are grouped according to the specific requirements of science, regulation, education, service and administration, and according to the character, scope, and magnitude of the problems being handled. And it should be recorded that the specific commodity is by no means neglected in the present set-up, either in organization or service. Simply stated, a problem is broken down into definite categories for solution. When the correct results are obtained, they are synthesized on a commodity basis. Information, whenever possible, reaches the farmer in a form definitely applicable to the production of a specific commodity.

Another proposal for alternative organization pertains to regulatory work. Some believe that all regulatory activities should be placed in a single bureau. They feel that economies could thus be effected. Others doubt this, but think that centralized policies and the development

of uniform, systematic procedures would result in more effective enforcement. The attitude of most people in the Department is this: Regulation, designed to eliminate or prevent social hazards, waste of resources, and economic abuses, draws its basic information and its general concept in enforcement, from research. Therefore, the Perishable Commodities Act, designed to prevent economic abuses, is administered by the Bureau of Agricultural Economics; the Lacey Act, affecting wild life, is administered by the Bureau of Biological Survey. This has resulted in two notable things: First, the bureaus have stressed educational, rather than punitive methods and thus have achieved a high degree of public cooperation; second, a result of the first perhaps, the procedures in enforcement are so smoothly functioning that few people regard the regulatory activities as actual regulation. Meat inspection, for example, is generally regarded as a necessary service activity.

No one contends that the organization of the Department, exactly as it stands, is the best that can be devised. What we have today is not the result of a preconceived plan or pattern. But neither do we have a structure that came about fortuitously. It is the outgrowth of seventy-five years of development and experience, and during that time it has evolved structurally and functionally to meet ever-changing needs. Its evolution is based upon the working experience of men in both the legislative and executive branches of the Government.

Those who criticize a government organization and assume that improvements and economies could be achieved by making wholesale

changes, by shuffling bureaus and divisions within bureaus, make, I think, two grievous errors: First, reorganization seldom results in significant economies; when properly handled, it does result in better coordination, accuracy, and service. Second, they overlook that reorganization within a department is a continuous process.

If this Department were organized now as it was in, say, 1922, it could not begin to meet its present responsibilities. If it should still be organized in 1950 as it is now, it would probably fall far short of meeting the needs of that time.

In every year since 1922, there has been an important change. Here are just a few. In 1922 and 1923 the Bureau of Markets, the Bureau of Crop Estimates, and the Office of Farm Management were consolidated to form the Bureau of Agricultural Economics. In 1924 the States Relations Service was abolished, and to meet new responsibilities there were created the Extension Service, the Office of Experiment Stations, and the Bureau of Home Economics. In 1925, nine separate offices were combined to form the Office of Personnel and Business Administration; subsequently, in 1934, under the impact of greatly increased responsibilities, the work was divided into an Office of Personnel and an Office of Budget and Finance. In 1926, the dairy investigations theretofore conducted by the Bureau of Animal Industry were set up as a separate bureau to enable the Department to meet the manifold problems in dairying. In 1928 three separate agencies were merged and designated the Bureau of Chemistry and Soils; at the same time the enforcement of the Food and Drugs and other Acts was assigned to a new

agency, the Food and Drug Administration. In 1929 the Packers and Stockyards Administration was transferred to the Bureau of Animal Industry and designated a major division of that bureau. In 1933 the Agricultural Adjustment Administration was established. In 1935 the Bureau of Entomology and the Bureau of Plant Quarantine, together with the disease-control work of the Bureau of Plant Industry, were consolidated into one bureau. In the same year, the Soil Erosion Service was transferred to this Department; shortly thereafter it was made a permanent part of the Department, and was designated the Soil Conservation Service. Related activities of three bureaus were transferred to the Soil Conservation Service.

A resume of intra-bureau organization activity during the same period would show a comparable shifting within the bureaus. For example, in 1930 the Bureau of Plant Industry combined nine separate project groups to form the Division of Horticultural Crops and Diseases.

If you wish to see for yourself a true record of organization changes, study the annual budget statements and appropriations. Each year every project of work, old and new alike, goes through an almost microscopic examination — first within the Department, then at the Bureau of the Budget, and finally at Congressional hearings. These hearings constitute an annual frank appraisal of values in relation to cost.

Thus, changes, to achieve better administration and service, are made in the light of actual working experience. This is the sound, orderly way. They are made in full recognition of the fact that deli-

cately balanced interrelationships should not needlessly be disturbed; that innovations not needed are bad. But changes are made when existing routines do not suffice to meet current responsibilities.

You and I work for an organization which, while not perfect, is admired by students of Government in every nation of the world. They recognize that the Department has more than mechanical efficiency. It has character. It has a history rich with useful contributions to the social, economic, and cultural welfare of the public generally. Perhaps that is why the late Sir Horace Plunkett, Ireland's great authority on agriculture, often described the United States Department of Agriculture as "the most useful institution on earth."

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THE OBJECTIVES OF THE SOIL CONSERVATION PROGRAM

Address of Howard R. Tolley, Administrator, Agricultural Adjustment Administration, before the Graduate School, Agriculture auditorium, 5 p.m., November 6, 1936.

As the Chairman has said, this Agricultural Adjustment Administration is something new in the Department of Agriculture. Though less than four years old, it represents something quite different from the older and more settled agencies of the Department of Agriculture. Our work, our method of doing work, and our objectives are quite different from some of the older, more settled agencies of the Department.

In talking about the Agricultural Adjustment Administration, or if you prefer, talking about operations under the Soil Conservation and Domestic Allotment Act, I think I had better go back a way and review for a little bit the events that led up to the passage of this Act, to make more understandable why we are what we are and why we have done or tried to do some of the things we have done or tried to do.

Now, I assume it is not necessary to go into detail before a group such as this about what we over in Triple A have come to call the farm depression of the 1920's. During the 1920's, there was more and more a feeling among farmers, and within the Department of Agriculture and the agricultural colleges, that there was an unreasonable disparity between the incomes of farmers and the national income or the incomes of other groups. I am not sure that very many of us understood just what was taking place, just what was causing this disparity, but as we look back on it now we can attribute it, I think, rather accurately to four or five or six things. One of them, maybe not the most important but one which we

never thought about back in the 1920's, was the fact that during and after the World War the United States changed from a debtor to a creditor nation. Then another thing, after the War came the rise of nationalism in Europe, in agricultural production in the different countries of Europe, and along with that the development of trade barriers which in themselves would have been enough to shut off to a considerable extent the outlets for agricultural products which this country had enjoyed up to that time in foreign countries. These factors were quite powerful, I think, and I believe it is generally agreed, in causing this increasing disparity in the incomes of farmers and other classes of people.

Then this country made matters worse by raising its own tariffs. The point which we did not recognize then was that by raising our own tariffs we were making it impossible for these nations which owed people in this country money, to pay their debts. In the latter part of the 1920's, at least, the demand for products abroad was supported artificially by people in this country loaning money to foreign governments, or to people in foreign countries, which was used to a considerable extent for purchasing commodities from this country; but at the same time we were doing and had done things which prevented those people who borrowed that money from ever paying it back to us.

In the 1926-29 period, we began to see that these things pointed to a rather permanent reduction in demand for export of agricultural products from this country, and toward lower acreages of our export crops. About that time O. E. Baker began to talk to us about the decline in number of horses and mules and development of machine power--if you want a big word, technological improvements. This too was a factor in bringing about a lessened demand for agricultural products. Then the world got into this de-

pression that began in the United States in 1929. The falling off in demand for export products became more accentuated as business fell off in this country, the decline in domestic demand became accentuated, and you all know the results in terms of prices of agricultural products and farm income. That is about where we were when 1933 came along.

Now, during that period of the '20's and up to 1933, solutions of the farm problem had been suggested and even attempted. Many of those suggestions came, in one way or another, out of the Department of Agriculture, or at least out of the work of the Department of Agriculture and the land grant colleges. We heard a lot about diversified farming; and in fact some people still say today that if we just had diversified farming all of our troubles would be over. Cooperative marketing was growing, and some people thought this was to be a panacea. Then you remember the McNary-Haugen movement. The McNary-Haugen bill just ten years ago was up in Congress. It was debated and passed by the Congress and vetoed by the President.

Then in 1929 we had the Federal Farm Board. You remember its program. At the same time we had the final blast of tariff protection, the Smoot-Hawley tariff, which, so far as our international situation was concerned, just served to make matters worse. The Federal Farm Board came into existence with what we now consider to be very limited powers in a very limited program in a period of world decline in demand and prices, and of course it did not do what it was supposed to do.

That brought us up to 1933 and the enactment of the Agricultural Adjustment Act. Just what was the situation in 1933?

In cotton we had a carryover of twice the normal and the average price in 1933 was 6 1/2 cents. In wheat we had a carryover of about 400 million bushels, more than half a crop, and a price of 35 cents. In

corn and hogs, we had 62 million hogs on farms on January 1, 1933, at a price of $3.44 average for the period 1928-1932. In tobacco we had 750 million pounds above the normal requirements. The number of milk cows had increased between 1929 and 1933 and the farm price of milk and dairy products was 55 percent lower in 1933 than it had been in 1929. There were more cattle on farms than at any time in our history and the price was the lowest in history.

What did we do in 1933? I am just trying to go through a little bit of history here, some things that have become history and probably will be real history for some time. One thing that was done was to plow up 10 1/2 million acres of growing cotton. This represented about 4 1/2 million bales of cotton.

And then came what my notes call the 1933 pig-marketing campaign, but which a great many people in the country call the pig-killing program. This was headed by Dr. A. G. Black, who is now chief of the Bureau of Agricultural Economics. As a matter of fact, those pigs were marketed, the meat was salvaged, and the by-products were salvaged.

Programs for wheat, cotton, tobacco, and corn and hogs were started in 1933 but some of them did not get into force until 1934. About 500,000 wheat farmers, 1 million cotton farmers, 375,000 tobacco farmers, and 1 million corn-hog farmers joined together with the Agricultural Adjustment Administration through the device of contracts and benefit payments to adjust production. You notice those are the export commodities--wheat, cotton, tobacco, and corn and hogs.

Then in 1934 the worst drought in history came along. The drought, the adjustment programs that had been thrown into gear in 1933, and drought relief activities of the Triple A and other governmental agencies--

those three things put together resulted in the disappearance at the end of 1934 of most of these accumulated surpluses I have mentioned. They had been used up. At that time some people thought the Triple A job was done and that it was time for the Triple A to fold up.

Along with these adjustment programs there was another branch of activity authorized by the original Agricultural Adjustment Act. It was what we called the marketing agreement phase of the Act. It empowered the Secretary of Agriculture to enter into marketing agreements and to issue licenses (or, later, orders) to the handlers of any agricultural commodity. That portion of the Act has been most useful to producers of milk and of fruits and vegetables, commodities on which there has been no production adjustment program.

We have had some Supreme Court decisions, you know, that have rather markedly affected the activities of the Triple A. The first one was the NRA decision. Since this is the Department of Agriculture and I am in the Department of Agriculture, and I guess this is a Department of Agriculture audience, I will say what I don't say very often, that the famous Schecter case involving the code for live poultry was developed in and by the Triple A, not by that great agency, the NRA. The codes for agricultural trades had been assigned by the President to the Secretary of Agriculture for formulation and administration, and he in turn assigned them to the Triple A. I don't know whether that is something to be proud of or ashamed of, but it is something we did of necessity in connection with the administration of the Triple A, and this whole general movement.

That NRA decision struck rather vitally at the marketing agreement and license provisions of the original Agricultural Adjustment Act. Congress proceeded to overhaul those provisions in the summer of 1935, and in the

latter part of the Congressional session of that year changed them very materially. Congress limited their application to fluid milk and a rather limited list of fruits and vegetables. It also limited the authority of the Secretary of Agriculture and, by that, the authority of the Triple A. The Triple A had the job thrust on it of going over all of the many marketing agreements that were in effect at that time, and of making them over in cooperation with the farmers and handlers affected.

Now, coming back to the production adjustment phases of the Triple A. I said that by the end of 1934 virtually all of the accumulated surpluses were gone, and that some people thought that the Triple A job was over and it was time to fold up. But that was not what happened, as you know. Previously the Triple A adjustment programs, largely as a result of suggestions from farmers who were participating, had begun to change their form. The emphasis began to be changed in the latter part of 1934 and in 1935 from the reduction of production, which had been the paramount issue in 1933 and early 1934, over to developing programs which would maintain the gains which had been made. We found that the ideas of conservation and good farming were coming more and more to the front and the idea of reduction of production as such was becoming less and less important. The benefit payment device, it was thought, could be used for insuring the cooperation of farmers all over the country in what I can call here conservation farming and good farm management. Largely as a result of work that had been done in the Department of Agriculture and in the experiment stations and colleges, it was found that if all the farmers in the country, or a large majority of them, should come to practice the right kind of farming, this problem of adjustment of production would be on its way to being solved. For example, if we had good farming all over the country--and I am using that term in

no precise sense at all--if we had good farming all over the country, the acreage of wheat farms would be such that the production from year to year would be rather well in balance with the demand that can be foreseen for wheat. The same would be true of cotton and would be true of these other crops which I mentioned.

Well, it was also found that if that kind of farming was practiced all over the country, more soil-conserving crops would be planted--more legumes, more pasture, and so on--and more efforts at controlling erosion would be put forth by farmers, and that we, the Triple A working with the farmers, would be doing something that within the long-time interest of farmers and the general public would conserve and upbuild our agricultural plant. It was found that this would tend automatically to keep production in adjustment and to maintain farm prices and farm income according to the mandate that had been given us by Congress.

That was the program that was being dicussed in the latter part of 1935, and in the winter of 1935 and 1936; but in the meantime the Agricultural Adjustment Act was going up to the Supreme Court. Now, the Act provided for processing taxes on the so-called basic commodities, to provide money for benefit payments. One of the basic commodities was cotton. There was a processing tax on cotton to be paid by the firms which processed cotton, those which make cotton cloth. A cotton processing firm in New England went into the hands of receivers, and the receivers' lawyers told the receivers that other claims came before the government's claim for the processing tax. The government--the Department of Agriculture, The Triple A and the Department of Justice--couldn't see that and went to court to try to collect that processing tax from that company in the hands of the receivers up there. Hoosac Mills was the name of the firm that did not

pay its processing tax, and it became famous when the six members of the Supreme Court said this processing tax was illegal, said this adjustment of production, this reduction of production as it had been called up to that time, was an activity in which the federal government had no authority under the constitution to engage in. They said that agriculture is a local matter, something that should be reserved for the states, and if not reserved to the states, reserved to the people to take action with regard to the acreage of the various crops and the volume of agricultural production.

That was on January 6, 1936. Again the question of adjustment of agriculture was up. Concerning this adjustment effort, in which a large majority of the farmers of the country were engaged, people asked, "Is it finished?"

But Congress, in February of this year, passed the Soil Conservation and Domestic Allotment Act. The 1936 Triple A program, as far as production is concerned, is a program that is being carried on under that Act.

Now, I want to go back a little bit to the programs of 1934 and 1935. Land taken out of production of cotton or wheat or corn or tobacco was to a considerable extent devoted by farmers to the production of soil-conserving crops. So one could say, that in 1934 and 1935, in the production programs of the Triple A, adjustment of production received primary consideration, and that soil conservation or conservation farming came second. Now under this Soil Conservation and Domestic Allotment Act, under which we are operating this year, the situation is just reversed. Good farming, or conservation farming, is primary, and adjustment of production is secondary. Now it so happens that the crops that back in 1933 and 1934 were called the surplus crops are called by the agronomists and scientists soil-depleting crops. They <u>are</u> soil-depleting crops. Any

general move on the part of farmers of the country to increase soil-conserving crops will, other things being equal, result in a decrease in the production of soil-depleting crops. That is the basis of the present program.

The objective this year was to get 30 million more acres of soil-conserving crops in the United States. Whether that objective has been reached I guess we won't know until the Division of Crop and Livestock Estimates puts out its crop report in December, which will contain its estimates of acreages planted in 1936.

There are two classes of payments going to farmers this year. Up in Triple A we call them Class I and Class II payments because the names were rather long and hard to understand. The Class I payment--and about three-fourths of the funds are being used for that this year--is a payment made to a farmer for definitely shifting acreage from a soil-depleting to a soil-conserving crop, or use. As I say, about three-fourths of the funds are being used for that.

Class II payments are being made to farmers for adopting soil-building or soil-conserving practices without respect to diverting acreage from soil-depleting to soil conserving crops. Such practices include putting on lime, using phosphates, planting to grass and legumes, and so on. Something like one-fourth of the funds are being used for that.

Under the old Triple A the Secretary of Agriculture had a contract with each one of these millions of farmers whereby each farmer agreed that he would do certain things. He agreed to reduce or limit his acreage in corn or cotton or wheat or tobacco. Both the farmer and the Secretary signed the contracts and presumably any one of these contracts could be taken into any court in the land and enforced.

The Supreme Court said the Secretary of Agriculture could not make such contracts, that they were a form of economic coercion. To the economists that was a new word. They do not know yet what it means. Anyway, we could not have contracts, and so this year farmers are applying for grants. The Secretary of Agriculture announced last March that the government would make grants of money to farmers under certain conditions. Those conditions were, as I said a moment ago, shifting from soil-depleting to soil-conserving crops, adopting soil building practices, and so on, during the year of 1936. The Secretary made that announcement, and now some millions of farmers--I don't know how many, I think perhaps 4 million--are applying for these grants, which will be forthcoming if farmers have complied with the offer which the Secretary made last spring.

That is about the situation today with respect to Triple A activities under the Soil Conservation and Domestic Allotment Act.

One development which I have not stressed yet and which may, in my mind, turn out to be the most important development of all in connection with Triple A activities, is what we have come to call the democratic method of procedure in making and administering the programs. (That "democratic" is spelled with a small "d".) In practically every agricultural county in the country, that is, in every county in which the farmers participated in the old Triple A programs and every agricultural county in which the farmers participate in the conservation programs this year, there is organized an association of farmers which we used to call a production control association. This year it is called an agricultural conservation association. In the old days, all the farmers in the county who signed contracts were members of that association. Now all those who apply for

grants are members. That association meets and elects a board of directors, and from that board of directors is chosen what we call a county committee, usually of three farmers. It is a sort of executive committee of the association, you see. That committee administers the program in that county. I do not know just how many county committees there are now--the number is between 2500 and 3000. Then in each State there is a State committee. In some States that State committee is elected by the county committees, and in other States it is appointed by the Triple A. The State committee is responsible for administering the State phases of the program and it is to the State committee that the county committee looks for advice and guidance.

Now, in these county associations and county committees, we have something new in American agriculture. They not only have accepted and carried out in a very creditable way the actual operation of these programs, but they have taken a very real and active part in developing the programs. For example, right now we--when I say "we" I mean all of these people out in the country, the county associations, county committees, and state committees, the Triple A in Washington, the Extension Service, experiment stations, and so on--are engaged in developing a program for 1937.

One of the first steps in the development of that program in most parts of the country was to ask the county committees to arrange for a series of farmer meetings, which were open to all of the farmers in their respective communities. The purpose of these meetings was to discuss the program as it had worked out in that community and on those farms in 1936, and to make recommendations, first, whether a program should be carried on next year; and second, what that program should be like and what changes should be made from 1936. I do not know how many thousands of such meet-

ings were held in schoolhouses and other places during the months of September and October, but practically all over the country such meetings have been held.

The recommendations and suggestions from each community in the county were compiled at the county office by the county committee as recommendations and suggestions from that county. Recommendations from each county came into the headquarters of the State committee, or, in some cases, to the director of agricultural extension. All of these county recommendations and suggestions were summarized into recommendations and suggestions coming from that State, and they now have come on down to Washington. Beginning next week, there is to be held here in Washington a series of meetings, regional this time. These will be attended by selected people. Some man has been selected from each state in a given region who has been through all this, knows what has been recommended and knows how it has worked this year. He has been asked to come in and sit down with the people in the Triple A and the Extension Service, who have been working in that region this year, to look over and talk over and appraise the suggestions coming from the States in that region in the light of suggestions and recommendations that have come from States in other regions and in the light of the laws under which we are operating. Out of those conferences here in Washington, to be held beginning next week, it is our hope there will come a rather definite formulation of program for 1937 which will be submitted to the Secretary of Agriculture for his final approval.

Now, looking ahead just a little bit: The Soil Conservation and Domestic Allotment Act provided that the program such as I have described can be carried out in 1936 and 1937 by the Secretary of Agriculture, but

that after January 1, 1938, it could not be carried out except on a state aid basis. You have heard the words--"there will be 48 little Triple A's, one in each State." More precisely, the law says that after January 1, 1938, there shall be designated by each State which wants to participate in this national program, a State agency which will be responsible for carrying out the program in that State; that that State agency each year shall submit to the Secretary of Agriculture a plan for that State; that the Secretary of Agriculture, if the proposed plan, in his opinion, will carry out and help to effectuate the policy of the Act, will approve the plan, and that upon approval of the plan, the Secretary will make available to each State funds for operating the plan.

Those of you acquainted with the operation of the Agricultural Extension Service, experiment stations, and Bureau of Public Roads, recognize something familiar in that idea of federal aid to States. The reason for that is that the Supreme Court said that control of production, or adjustment of production, was something outside the scope of the Federal government. One of the objectives in the Soil Conservation and Domestic Allotment Act is to attain parity incomes for farmers. As far as the Agricultural Conservation program is concerned that objective is dormant until this becomes a State aid proposition, under the present wording of the law.

For this program to become a State-aid activity by January 1, 1938, it will be necessary for each State to pass a law, set up an agency that will be satisfactory to the Secretary of Agriculture, and submit a plan that will be satisfactory to the Secretary of Agriculture. Those plans will be satisfactory to the Secretary, no doubt, only when, if they are all put together, they make a real national program for agriculture. If the law is

carried out as now written, we will have a real year ahead of us in 1937.

Now let me turn back for a few minutes and then I will close--back to the relationships between this Triple A and other agencies in the Department of Agriculture, for after all, the Triple A is a part of the Department of Agriculture. In my own opinion a good measure of such success as it has had is due to the fact that it has been, from the start, a part of the Department of Agriculture. Well, we have research agencies in the Department. The research agencies are the backbone of the Department of Agriculture and have been since it was established. Since the Triple A is and has been a part of the Department of Agriculture, it has been in position to draw directly upon all of the information that has been piled up in the older agencies of the Department since they were established. Since agricultural activities were primarily economic activities, most of this "drawing upon" has been done with respect to the Bureau of Agricultural Economics. In the early days of the Triple A, the Bureau of Agricultural Economics thought it was being drawn on, not only for information, but for men and finances to run the program--which was true to some extent.

Then there is the Extension Service. When the Agricultural Adjustment Act was passed and before any of the programs were developed, it was decided that the Extension Service of the Federal Department of Agriculture and of the State colleges should have a real part in the participation of the program. So, we have the Extension Service of the Department and of the State colleges, clear out to the county agents, taking a very active part in the programs.

I have mentioned the production control associations and the agricultural conservation associations. In a very large proportion of the counties in which those associations are now, we find the county agents

working very closely with them. I do not know in what proportion of cases the county agents act as secretaries of those associations. That brings up one of the real problems in the relationship between an agency such as the Triple A and an agency such as the Extension Service or the State college. The problem of what relationship should exist between them is illustrated by the fact that in some places the county agent is secretary of the association and in some places he is not. Just what the longtime relationship will be has not been answered yet.

I can not say very much about the future of the Triple A as such, because I do not know. I do not know that anybody knows. But I do have this feeling, that the establishment of the Triple A represented the beginning of a re-direction of the publicly supported activities of the country, Federal and State, that pertain to agriculture. Up until that time, it seems to me as I look back upon my own experiences in the Department of Agriculture, and in a college of agriculture in a university, that the underlying philosophy had been to find out the facts, whether economic or biological or agricultural, and to tell the folks about those facts. Finding out the facts meant research. Telling the folks about those facts meant extension. And then the job of the government, Federal or State, was done.

But in 1933 Congress recognized that the job was not done then, that there was some more for these government agencies to do. That was to make it possible for farmers to work in a collective manner to use these facts in a way that would be of most benefit to them. That, I think, represented the change in the underlying philosophy, which most of us did not recognize at that time, which many will not agree with at this time, but which, if it remains as the underlying philosophy of government activity, in the long run means very significant changes in the makeup and work of the Department of Agriculture and the State colleges of agriculture.

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UNITED STATES DEPARTMENT OF AGRICULTURE

GRADUATE SCHOOL

PERSONNEL OBJECTIVES

How They Contribute to Department Objectives

By
Dr. W. W. Stockberger,
Director of Personnel.

Prepared for delivery on November 13, 1936. One of a Special Series of Lectures on Department Objectives Presented Under the Auspices of the Graduate School.

The outstanding feature of the progress in personnel administration in recent years is the increasing recognition of the human factor in efficient administration and the necessity for a corresponding readjustment of our theory of values. Slowly but surely during the last five decades public interest has become aroused in the conservation of our natural resources. At the present time attention is focussed on the conservation of the Nation's most valuable natural resource, the soil. Likewise, the conservation of our human resources has long commanded public interest and support. The dramatic successes in the combating of disease and in the development of means of protection of children and adults against avoidable disease and death, tell their own story of the conservation of human life and health. But the conservation of natural or of human resources is of little avail in the absence of constructive plans and methods for their careful and provident management and utilization.

The economic utilization of human resources is a problem which arises whenever a number of individuals become systematically united for the accomplishment of some definite end or work. Such an assemblage of persons joined together for community of action, develops within itself a series of human interrelationships which form the essential structure of an organization. To understand these interrelationships we need a knowledge of the characteristics of the human elements involved; of their action and reaction under varying circumstances; of the treatment necessary to produce in them a given effect; and of the particular conditions which favor the production of desired results.

In some quarters, unfortunately, the magnitude and importance of the problem of utilizing our human resources is not understcod. Indeed, there are those who either deny the existence of any such problem or who deride it as one of trifling consequence. Nevertheless, the attainment of any or all of the objectives which you have heard discussed from this platform is wholly dependent upon the extent to which a unified purpose to accomplish those objectives can be developed in the pertinent groups which constitute our departmental organization. On approaching this problem it becomes evident that, instead of a case of simple cause and effect, we are concerned with the complex resultant of a series of influences, some of which contribute to the desired end, whereas others detract from it. The segregation of these influences, the determination of the conditions under which they produce benignant results, and the formulation of methods for their effective application and control, may be considered as having a place among the general objectives of personnel administration. However, there is a wide variation in personnel objectives as defined by different writers on the subject. This may mean a lack of common understanding of fundamental objectives, or it may mean that the objectives were defined with respect to a particular set of conditions and were not intended as generalizations. Moreover, in some instances functions and techniques of personnel administration have been included in lists of objectives.

May there not be still another interpretation of this diversity in the definition of objectives? Taken individually, no one of them

appears to be an end in itself, but rather a means to an end not expressed; taken collectively, they appear to be oriented to a common, fundamental purpose which I have ventured to express as follows: The ultimate objective of personnel administration is the maximum utilization of our human resources.

There are several implications in this statement which are worthy of further elaboration. First, just what is understood by the expression personnel administration. Here, as we saw in the case of objectives, there are different definitions, and certainly very diverse conceptions of the scope and meaning of the term. Not long since a certain individual who had been long engaged in personnel work stated that a knowledge of civil-service rules and regulations and of the comptroller's decisions comprehended the entire field of personnel administration. Twenty-five years ago this statement might have passed unchallenged, since at that time personnel work was generally regarded as a more or less specialized kind of clerical work, and unfortunately it is still so regarded by altogether too many persons. The keeping of records of personnel is a very necessary kind of clerical work essential to and forming the basis of sound personnel administration. It is the foundation upon which the superstructure of personnel administration is erected. Stated briefly, the problem of modern personnel administration is envisaged as the maintenance of the highest possible quality of personnel by securing the persons better qualified than any others for the particular tasks at hand, and so ordering their efforts as to make them most effective.

This broader conception of personnel administration which had been slowly emerging in government circles for some fifteen years, gained unexpected prominence as a result of the establishment of the so-called emergency agencies, which were authorized by the Congress to select the necessary personnel without reference to the requirements of the civil-service rules and regulations. The men so brought into the service to develop the personnel programs of these new agencies were either schooled in the principles of public administration as taught in a number of colleges and universities or experienced in the field of industrial management, and have established in the new agencies an improved technique and methodology in personnel administration which has focussed attention on a subject the full significance of which had not previously been generally recognized.

This is neither the time nor the place to discuss the question of appointments outside of the civil service. Suffice to say in passing that the historian of future years, when looking back upon this period, will undoubtedly single out the first part of the present decade as the beginning of a new era in the field of public personnel administration. With this object lesson before them, civil-service employees who have been overready to condemn appointments outside of civil service would return to themselves and their government a far greater benefit if instead they devoted their energies to effecting much-needed improvements in the quality of service now rendered by civil servants.

A second implication in the statement that the ultimate objective of personnel administration is the maximum utilization of our human resources, is that employees are not machines but sentient human beings. Progressive and enlightened personnel administration is based upon the theory of mutual interest in the welfare of the organization and mutual benefit both to employer and employee. Industrial management seeks to increase the quantity and quality of the worker's output and to maintain the most favorable ratio between the cost of human services and the amount received for the product of those services. In government, which is not organized to make money but to spend money, the cost-accounting yardstick for measuring the value of employee services is lacking. It therefore becomes an important personnel function to develop standards by which the value of the services of government employees may be determined and to discover and utilize those practices, not inconsistent with the theory of mutual benefit to employer and employee, which will insure the highest type of service to the public and also maintain a correspondingly high morale.

A third implication in my major thesis is that there should be high standards of personal and official conduct on the part of officials and supervisors. They must realize the important part each and every one plays in the effective utilization of our human resources. It is a matter of common knowledge that the personnel of every bureau, division, or section is very responsive to the attitude of the officials in charge. The taking upon oneself of direct authority over other

persons, therefore, carries with it the social obligation to use it wisely and judiciously. It implies an understanding of the causative factors of human behavior and of the methods of influencing it favorably; it implies the capacity to analyze the effect of different policies upon human beings in all their complex working relationships; and it implies the ability and purpose to be ever considerate of the interests of employees and zealous in their protection against arbitrary or unfair treatment.

A fourth implication is that every individual in an organization, who is in any respect responsible for the supervision or guidance of others, shares in the actual work of personnel administration. The formulation of personnel policies or the development of practical personnel procedures by a central staff agency will be so much wasted effort if misunderstood or disregarded by line officials and supervisors. Policies, programs, and procedures are translated into human activity at the contact point between supervisor and supervised, but the translation may be only a shadowy semblance of the original message, if the supervisor is not fully alive to his responsibilities.

Brief mention may now be made of some of the elements which are essential to the success of any well rounded program of personnel administration. Continuous efforts must be made to increase the standards of competence. The responsibility for recruitment, that is, the discovery of qualified candidates for the public service, has been relegated almost entirely to the Civil Service Commission. Because

there is no well defined procedure for stimulating the interest of the better qualified, selection is largely confined to those who voluntarily apply for employment. Competitive examinations, therefore, do not necessarily secure the best qualified, but only the best of those who apply. They are like traps, which do not roam about in search of prey but, rooted to one spot, ensnare only such visitors as come to them by chance. In general, recruitment methods in the public service are inferior to those of large industrial organizations. Indeed, the methods of recruitment employed in football, baseball, and possibly prize-fighting appear to be more successful in developing a supply of recruits of high competence than those followed in the public service.

Obviously, there is a crying need for a thorough analysis of all the factors which now restrict adequate recruitment and the adoption of an aggressive program for the improvement of the situation. This might well take the direction of a much closer reciprocal relation between the type of education offered by the colleges and universities which supply the major part of the recruits to the professional service, and the requirements of the public service. A recent inquiry made of a large number of the professional employees in this department developed the interesting fact that the curricula of the colleges from which they came had not provided certain courses of instruction which, they now find, would be advantageous in the performance of their present duties. This lack has been

in part compensated by the courses offered by our Graduate School, but it still seems desirable to urge the modification of the courses of study in schools and colleges which prepare large numbers of our recruits, to the end that a higher degree of competence may be assured.

Maintenance of a sound promotion policy is imperative. The prospect of promotion is one of the strong incentives to earnest effort, conscientious application, and to studious preparation for the assumption of additional responsibilities. Promotions are a necessary attendant upon the growth and development of an organization. There is a constant intake of new personnel in positions at the lower levels of compensation and responsibility which is counterbalanced by a constant outgo from positions at the higher levels of responsibility as a result of disability, superannuation, or death. There must be continuous advancement to successively higher and higher positions if gaps in the ranks are to be avoided and key positions acceptably filled.

Promotions are not to be considered as special favors or as rewards for long service but as merited recognition of increasing competence and demonstrated ability to undertake and successfully discharge greater responsibilities. When viewed in this light, it becomes apparent that in his own self-interest every employee should be impelled to utilize to the fullest extent available educational facilities to extend his knowledge and broaden his outlook.

The problem of the unprogressive employee must be squarely faced and solved. In practically every branch of the department will be found a small percentage of employees who for considerable periods of time have made little or no progress toward the higher brackets of the compensation scale or who have made but slight advancement in the scope and responsibility of their work assignment. They have seen their fellows advanced to higher and higher levels of responsibility whereas they have been left behind. Is it any wonder that eventually they become disillusioned, disappointed, discouraged, disgruntled - destined at last for deadwood? Why do we have these cases? Were these employees deficient in fundamental training? Were they assigned out of their aptitude? Was proper supervision and instruction lacking? Were they victims of the accident of circumstance? Or did they possess some personal characteristic which opposed their advancement? If ten or twenty years have elapsed since the employee entered the service, the answer to these questions will be difficult. It may be too late to apply a remedy in the cases of long standing, but what excuse can be offered for allowing them to develop in the future? Unfitness or incompetence should be detected during the probationary period and permanent appointment refused. In the other cases, supervisors concerned for the full utilization of the human resources placed at their disposal would have discovered the inhibition to progress and have applied the proper remedy.

The inculcation of a higher sense of personal responsibility to the public at large is an objective of primary importance. The attainment of each and every Department objective is conditioned, to a varying extent perhaps, by public sentiment toward the work of the Department, and public sentiment may easily be affected adversely by lapses from high standards of conduct and demeanor on the part of employees who sustain a contact relation with some portion of the public. Sentiment for or against an organization is readily formed by impressions gained from personal contact with a limited number of its members or representatives. The low estimation in which civil-service employees are held by a large part of the public is unquestionably due to reprehensible attitude or conduct on the part of a small minority, but the entire service is condemned as unworthy or inefficient. In like manner discredit may be cast upon the Department, from the Secretary down, by the indiscreet or ill-considered action of a few employees. If we are to attain this objective, our employees must be convinced that it is a part of their responsibility to become a definite and constructive influence in developing better and broader public relations.

Finally, there is the question of administrative attitude toward employee organizations. When the first union of federal employees was formed, it met with general disfavor in administrative circles, probably because of a fear of encroachment upon administrative prerogatives. The right of employees to organize, then questioned, has since been

established by statute, and the few remaining individuals who attempt by coercion to restrain employees under their jurisdiction from joining employee unions or participating in their activities, must be regarded as out of sympathy with modern social progress. Those employees who at times appeared to be dominated by self-interest and to expend their efforts on immediate personal advantage may have lacked effective leadership and opportunity to familiarize themselves with the established procedure of governmental operation. What was needed then, and would be very wholesome at the present time, is a thorough exploration of employer-employee relationships and of employee responsibilities as well as employee benefits. To break down such barriers as may now exist between management and employee organizations and to recognize them as potential mechanisms for the more effective functioning of government will further contribute to the maximum utilization of our human resources.

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UNITED STATES DEPARTMENT OF AGRICULTURE

GRADUATE SCHOOL

SCIENTIFIC RESEARCH

Its General Purpose and How It Contributes to Public Welfare

By Dr. John R. Mohler, Chief,
Bureau of Animal Industry

Address, Department of Agriculture Auditorium, November 20, 1936.
One of a Special Series of Lectures on Department Objectives
Presented Under the Auspices of the Graduate School

At a round-table discussion of biology in a certain university a group of students was discussing the duration of human life and especially the ability to determine length of life in advance, for individual cases. The discussion was unproductive of definite conclusions until one of the group, somewhat irked by the generalities, announced that he had an uncle who knew the time of his death in advance accurately to the very day. As evidence to support his statement he then remarked, "My uncle knew the day he would die because the warden told him."

Fully appreciating that many of you have transportation schedules to meet and appointments for the evening, I have timed the duration of this lecture to about 40 minutes.

Especially in recent years scientific research has acquired an atmosphere of glamour. Certain results of human-interest character have been the inspiration of popular writings and have furnished themes even for romance. Many an entertaining hour might be derived from accounts of the fruits of research in their beneficial application to agriculture and public welfare. But our present purpose is not to publicize research. It is rather to view it dispassionately and from an objective standpoint. Those of you who deal with research at close range know that it is a work-a-day activity. Results are the product of hard, methodical, and oftentimes distasteful work.

In its essentials, research is the means by which man from the dawn of history has sought to control and improve his environment. From the Stone Age to the time when he first used metals was a long, tedious climb toward economic security.

With the passage of the centuries man found that he could improve his mental as well as his physical equipment. And today mankind chooses as leaders not the most powerful or skillful physically, but instead those with well-trained, keen, and active minds. Thus in this Department we find a picked, skilled group of scientific workers to whom millions of our population look for the solution of many perplexing questions. These problems run the gamut of human experience. But in spite of the centuries that have passed since man first sought to establish himself securely on the earth, most of the questions for which answers are diligently sought still relate to means of conserving human, animal, and plant life and, directly or indirectly, bettering his social and economic welfare. Food, clothing, shelter, health, weather, and means of travel - these are still uppermost in the public thought.

It is rather well known among educators that a very small percentage of people - probably less than 5 percent - display marked originality or constructive ability. Most persons are imitators rather than originators. For example, in extension work many of the best results obtained are through demonstration. But the number of originators is surprisingly small in proportion to the population as a whole.

Through the selective process of Civil Service in addition to natural aptitude and training, the Department of Agriculture has acquired a large corps of capable research workers. The scope of their work is exceedingly broad as may be seen from a perusal of the published list of technical workers and their titles. The casual visitor to the Department is likely to be amazed at the number of these employees and the vast space devoted to laboratories and offices. Nor does this space include the much larger facilities provided at experiment farms and field laboratories. From the array of personnel and facilities, the impression that even so good a thing as research may be overdone may take root in the visitor's mind. But this is not a normal sample. We see here a great concentration of technical service.

A better view of the research situation may be seen from a survey of animal-breeding research conducted a few years ago. This survey included the combined work of the Department of Agriculture and the State experiment stations. One of the significant parts of the study was a comparison of the financial allotment to animal-breeding research and the census value of all farm animals in the United States. The comparison showed, in brief, that for each $100 of census value, the Government and States combined spent less than 1 cent for research devoted to increasing the usefulness of these animals to their owners and to the public in general.

I mention this point not as a suggestion for more work or more funds, but merely to help us view the situation in its true perspective. In proportion to the work to be done, we have a comparatively small corps of specialists although they do constitute a large proportion of the Department's personnel. At various times Department officials have presented abundant evidence to show also that research work is a highly profitable enterprise as judged from a ratio of the funds invested in it to the resulting financial benefits.

Typical research projects ordinarily receive allotments of from $5,000 to $50,000 annually, comparatively few exceeding the larger figure. Well-established benefits commonly range from 100 times to several thousand times the expenditure. The ratio of benefit to cost varies greatly, of course, depending on the character of the work and the size of the industry to which the results apply.

The influence of scientific research on industry may be illustrated by scores of examples. As a typical one consider the use of skimmilk which a few years ago was largely a dairy byproduct fed to pigs, chickens, and other animals or which was wasted. Then research showed that dried skimmilk could be used commercially in making bread, ice cream, and other foods. Today much more dried skimmilk is used as an ingredient of foods for people than as stock feed.

But the official authority for this work in the Department has more substance than any appraisal I may give it. For many years Congress has both expressly directed and authorized scientific investigations. Such sentiment crystallized further last year in the passage of the Bankhead-Jones law which provided for basic research in the Department of Agriculture and in the State experiment stations and land-grant colleges. This law directs the Secretary of Agriculture to conduct scientific, technical, economic and other research into principles and laws underlying basic problems of agriculture in its broadest aspects. The law goes still further by specifying certain types of research.

It directs the Secretary to conduct research to improve the quality of agricultural commodities, to discover uses for farm products and byproducts, and to study the conservation, development, and use of land. The Secretary likewise has expressed his views clearly on the Department's research program. Research for basic laws and principles, Secretary Wallace has stated, often has more value than research for particular objects. Scientific work in the Department of Agriculture, he has pointed out, has been developed largely to meet emergencies, to throw up quick defenses against animal and plant pests, and to solve economic problems. This is necessary, but studies of more fundamental character are equally important.

Thus as foundation stones on which we may continue our building operations we have the following: (1) The basic fact that research is the best means by which man controls and improves his environment; (2) the knowledge that the responsibility for conducting research rests on a relatively small group of persons having suitable ability and training; and (3) research by Federal and State agencies is a wise investment authorized by Congress.

Granting that we are all in accord on these points, let us consider the logical objectives and the means of best reaching them. It seems axiomatic that the foremost objective in research is to expedite it, to produce more results - of a dependable character, of course - within a given time. Perhaps there are some in this audience who may be inclined to doubt that research involving growth of plants and animals and painstaking tests can be materially expedited. Thorough research, it is true, involves generally a slow and often laborious succession of steps. Yet I have observed and am

strongly of the opinion that much can be done within our organization to remove certain obstacles that have tended to retard the conduct of research work, sometimes to a very serious degree.

My proposals on this point conveniently fall into two groups: (1) The things that research workers themselves may do, and (2) various things that other classes of employees may do to expedite this type of work.

It has been my privilege over a period of years to know and work with outstanding scientists. Many of them have been well known in the Department and elsewhere for their important contributions. One of these men was the late Dr. Marion Dorset. He made discoveries still worth millions of dollars annually to the Nation. He discovered and developed the serum treatment for the prevention of hog cholera; he improved and refined methods of making tuberculin; he made contributions to scientific knowledge underlying meat inspection; and he contributed greatly to present human knowledge concerning the efficacy of dips and disinfectants used for scores of purposes. He was a thorough scientist and his efforts were conspicuously prolific of results.

Though these same qualities apply to many other workers in the Department, I mention Dr. Dorset because of an incident that happened a few years before his death. He was primarily a biologist, but he kept constantly in mind that his field of endeavor was not the only fruitful or important one. He consulted other specialists freely. He had been working on a series of tests which was giving uniformly positive results. One day he approached a colleague with this problem: How many times must I repeat this experiment and get the same results to know that it will always continue to give the same results beyond a reasonable doubt? This particular series of experiments was very time-consuming. He wanted to conduct it long enough to be certain that his results were dependable, yet he sensed the futility and wastefulness of prolonging the series unduly, which would also mean withholding very important results from the public. His controls were so complete that the question he proposed had become purely a mathematical one. It baffled him and several of his coworkers, yet the question obviously was simple and practical from both scientific and administrative standpoints. He obtained the answer from a well-trained statistician in the Bureau of Agricultural Economics, a young man who, incidentally, has been conducting a class in this graduate course, Mr. Alexander Sturges. A succession of seven positive results in a row in the same experiment gives, as the chance of error, only 1 in 128. By conducting the test three more times, getting 10 positive results in a row, the probability of error is only 1 in 1,024. In the type of work under consideration the probability of being right at least 999 times in 1,000 was deemed adequate.

Mathematics is now playing a very important part in many lines of research work. I mention the case merely as an example of one somewhat unusual type of application of mathematics to a biological science.

Previous speakers have mentioned the value of consultations as a means of furthering Department objectives. I endorse this means of expediting official work, particularly in planning research work. I think we

should draw a distinct line, however, between real consultations and unduly long conferences. Another means by which scientific workers may be of greater assistance to one another and to the public is the crystallization of their essential findings in writing. This does not necessarily mean the publication of technical bulletins and Journal papers in all cases, But there should at least be suitable announcements, even though brief, in official reports or in scientific periodicals of good standing. Such procedure tends to prevent unnecessary duplication of scientific effort and also helps to avoid loss of data or its misinterpretation. This remark applies especially to cases in which scientific workers leave the Department prior to the completion of projects to which they are assigned.

To determine how scientific workers themselves regard this question of expediting research work, I consulted several in various bureaus. Following are some means proposed by thoughtful workers for expediting investigations in their particular fields.

A Department scientist who has had an exceptionally broad technical training, together with teaching experience, offered these suggestions for making scientific work more fruitful: "Study fundamentals thoroughly," he advised, "not only in the field of science but in processes of reasoning." Continuing he pointed out that the study of philosophy helps greatly in planning and interpreting scientific work with maximum accuracy. Knowledge of such fundamentals makes one more certain of his judgment. It marks the difference between the trained botanist and the gardener; between the civil engineer and the foreman of a gang. The foreman would say of the engineer, "He's the man who plans and lays out our work." Even the elusive quality that we call originality or inventiveness, according to this scientist, lends itself to ready analysis. This quality is not abstract as it seems. When analyzed it consists in an aptitude not so much for presenting things actually new, but for combining well-known ideas and materials into new relationships. And according to Aristotle, there exist only 10 elemental ideas or categories.

Another means of improving Department research is a greater willingness to think. The scientist who made this observation pointed out that the persons who are truly willing to think are much fewer in number than others who, though capable as thinkers, do not apply their reasoning powers to a full extent.

Possibly I can best illustrate this point by outlining an alleged incident involving a problem in physical science. The owner of a gold mine near Nome, Alaska, had a quantity of gold ready for shipment. He weighed the gold carefully and packed it in bags which, in turn, were placed in boxes. The value of the gold was $600,000. He shipped the entire lot by boat to San Francisco in care of a messenger who personally kept all the keys to the boxes and was responsible for the shipment. The owner meanwhile flew to San Francisco. When the shipment arrived the owner weighed the gold again and found that it weighed slightly less, the difference amounting to $1,860 worth of the precious metal.

Circumstances attending the conduct of the messenger caused him to

be charged with the disappearance of the gold. At the trial it was argued by the defendant's counsel that the loss of gold was apparent and not real. He declared that the value of gravity at Nome, Alaska, was greater than at San Francisco since Nome is nearer to the center of the earth owing to its flattening near the pole.

An expert witness was called to testify. When questioned as to gravity at Nome, Alaska, and San Francisco he stated that there was a difference. When asked the amount of difference he supplied figures showing the greater value of gravity at Nome, than at San Francisco. The defense lawyer then showed that the difference in gravity, as presented by this expert witness, corresponded closely to the difference in the weights of the gold at Nome and San Francisco, thereby accounting for the apparent loss. Not fully satisfied, the prosecuting attorney inquired about the method of weighing. The mine owner testified that in both cases he had used the customary type of beam balance and also standard weights that had been calibrated against similar weights of the United States Bureau of Standards. On the basis of the testimony the messenger was acquitted. The question now arises, was the acquittal proper from a scientific standpoint? Bear in mind that all the essential facts in the case have been presented. Moreover, the solution requires no more scientific knowledge than an elementary course in physics.

The acquittal, of course, was improper and a miscarriage of justice notwithstanding the seemingly convincing chain of circumstances. The pull of gravity, though slightly greater at Nome than at San Francisco, nevertheless operates the same on both sides of the scale beams at either of those places or anywhere else. And since standard weights were used at both places, the weight of the gold also should have been the same. Actually, some of the gold had disappeared during shipment notwithstanding the plausible defense.

I mention this point merely to show the difference between superficial and more scientific reasoning. The apparent answer to a question is often far from being the correct one.

A truly scientific approach to a problem involves also a desire to listen as well as to talk in group meetings and to interpret data with a fully open mind instead of to prove the correctness of one's own viewpoint.

Still another suggestion for improving scientific work relates to the selection of new staff members known to have a broad scientific foundation. The scientist making this suggestion pointed out that the trend of scientific training in universities is now away from too early specialization and toward a broader and more substantial groundwork in the principal sciences and other fundamentals. Specialization, he points out, is being obtained more and more through postgraduate courses. In this connection it is noteworthy that the oldest agricultural experiment station in the world, the Rothamsted station in England, deals largely with the study of principles. The discoveries of this station have been so outstanding that scientists from all over the world deem it a privilege to visit there and acquaint themselves with its methods.

Other suggestions made by scientists on means by which they may expedite and improve their work were briefly as follows: More careful and thorough planning in order to anticipate more fully the difficulties likely to arise; visits by research workers, especially the younger and less experienced, to other laboratories where outstanding scientists are engaged in similar lines of study; development of means for reducing untimely interruptions of important work by routine duties and casual visitors; preparation of more printed or mimeographed matter for use in connection with correspondence to reduce the need of dictating long letters; greater promptness on the part of other scientists and reviewers in examining and commenting upon scientific manuscripts.

Let me assure you that none of these suggestions were offered as complaints or in any spirit of unwillingness to perform duties outside of the research field. Rather the suggestions were prompted by first-hand experience of persons who seek to utilize their ability most fully along the lines for which they are trained. Those who offered them appreciate that scientific workers should have numerous contacts and especially that they should have the opportunity to become more familiar with the character and objectives of large projects in which each scientist's contribution may be but a small part. From my own observation I should like to add the advisability of welcoming visits, to Department laboratories, by outstanding scientific workers from other countries. On several occasions such visitors from abroad, holding proper credentials, have spent several months in our laboratories or at our experiment stations with benefit to the Department as well as to themselves.

So much for the means by which scientific workers may aid one another in furthering their objectives. Now bearing in mind the public value of good research, let us consider how other workers in the Department may be of assistance to the scientific research program. Their greatest helpfulness, in my opinion, is in relieving the scientist of many extraneous duties. Without attempting to cover fully the field of possibilities, let me cite a few typical examples.

Many personnel questions arise involving appointment, changes in classification, transfers, and that general class of problems. Here is an opportunity for personnel officers and members of their units to handle most of the necessary paper work without requiring the research staff to delve into the details of personnel procedures.

There is also a very close relation between research and regulatory work in the Department. Law enforcement is based to a considerable extent on scientific investigation and the testimony of expert witnesses, yet there are opportunities for improving these relations. I have in mind particularly those cases in which research or other scientific units operate under the direction of regulatory officials. Though in respect to that particular organization, research work may be subordinate, there should be a full recognition that basically research work is at least of equal value.

The Department's editorial and information workers likewise have many

contacts with the scientific staff. Much of this work is decidedly helpful to scientists in the clear presentation of their data and in acquainting the public with results by means of the press and radio. Yet here too there are opportunities by which the capable information worker can save the scientist a great deal of time and some mental anguish. I refer not only to prompt handling of manuscripts but also in relieving the scientific worker of various details required by Department regulations and procedures. The preparation of news material, for instance, by a press or radio writer relieves the scientist of a task for which he may not be trained and which often requires a great deal of time on his part. The same remark applies to contacts of research workers with the offices of motion pictures and exhibits.

The economist also can aid greatly in scientific research programs. By reason of his training and experience in economics he can very capably indicate the fields of study in which the results of research will have widest and most beneficial application.

In the matter of necessary supplies, apparatus, record forms, and preparation of maps and charts, workers in all these fields, likewise, can be of distinct aid in furthering the Department's research program. The same remark applies to the librarian, accountant, file clerk, photographer, subprofessional worker and many others. Potentially all employees are valuable assistants in research work to the extent that they render aid by relieving the scientist of duties extraneous to his main job of research.

I have not included the Department's legal staff in the foregoing groups for the reason that we may appropriately consider them separately. Scientific research deals with fundamental natural laws, self-enacting and self-enforcing in contrast to so-called man-made laws. Occasionally the results based on natural laws have been in conflict with the statutes. I have in mind the case in which southern cattle fever was designated by an act of Congress as noninfectious. That was the belief at the time the law was passed, but later when research showed the infectious character of this malady, the law which classed it as a noninfectious disease was still on the statutes and continued so for many years, until finally Congress corrected the error. Though seemingly a trifle, this incident illustrates the precedence that natural laws take over those enacted by men. Hence, it seems most appropriate for the Department's legal staff to keep in touch with scientific research so as to be in a position to give the scientist a helpful legal hand when need arises. From my observation this is already being done, especially in connection with the procurement of public-service patents, in drafting proposed legislation and regulations involving scientific developments and in other fields.

Under the conditions surrounding experimental work in the Department, there is little danger of the publication or other announcement of hasty or ill-considered conclusions. The system of close review and interbureau criticism may be irksome at times but this is nevertheless a most valuable safeguard. Yet there have been occasions when questionable results have almost appeared in publications bearing the seal of the Department. For the most part, undependable findings are charitably received by other research workers, when errors become apparent in the course of endeavors to repeat the experiments and test the results. But when scientific work is related to law

enforcement, and especially when it deals with foods, drugs, and products placed on the market commercially, serious embarrassment may arise. For instance, the Department once received for publication a scientific paper asserting that a saline solution had been found to be effective in freeing a certain type of animal from a certain species of parasite. The results of the paper were not in harmony with well-known characteristics of saline solutions used for the purpose described nor was there satisfactory evidence in support of the assertion made. You can readily see that had the Department published such a statement officially, it might have proved extremely embarrassing. Drug manufacturers would merely need to go down to the ocean with their bottles, fill them with sea water, and place them on the market with labels to the effect that the contents were effective as a vermifuge. If our alert associates in the Food and Drug Administration undertook to interfere with such a business in the interests of public welfare and to prevent a grievous deception they would be faced in court by the Department's printed document supporting the alleged reliability of the treatment.

Let us now consider a few very personal qualities in scientific employees that are conducive to the effectiveness of the Department's research program. The qualities of cooperativeness and altruism are so obvious that we need to give them but passing mention. Generosity and fairness in giving credit to others are likewise self-evident. Diligence and patience are also valuable pieces of scientific mental equipment. So let us consider a quality less often associated with research activities. I refer to diplomacy in its broad sense. This does not imply any lack of decision or any tendency to compromise with the truth. However, situations sometimes arise in which a scientist must disagree with persons holding widely accepted views. And it is to the advantage of the work not to disagree in a manner that will antagonize persons with whom the Department must later have cooperative relations. In a study of stock-poisoning plants, for instance, many fantastic stories regarding the cause of losses arise. These sometimes are repeated so often that mere rumor assumes the semblance of fact. There is a certain plant called bitter rubberweed which is now known to contain a poisonous chemical principle injurious to sheep. At the time the Department began to investigate this plant, there were persistent reports that losses from it were caused by the formation of rubber balls in the animal's stomach. The plant was known to contain considerable rubber which was supposed to have been extracted in the process of digestion, formed into balls and to cause death by preventing the passage of food material into the intestines, In just which of the four stomachs of sheep this was supposed to occur was never disclosed and our investigator was never able to find anyone who had actually seen the rubber balls Plenty of men said they had been told about it by someone who had seen them but the actual observer was never found.

In setting about to obtain facts to correct unscientific beliefs we must recognize the persistence with which the human mind tends to cling to misinformation such as most of the so-called superstitions. . Blunt disagreement and contradiction are seldom effective means of correcting erroneous beliefs. Generally the better course is to plant the new-found seed of scientific truth, nurture it well, and let it grow and flourish, thereby crowding out the weed of ignorance.

The eminent German scientist, Dr. Wilhelm Grau, has appropriately said, "A research problem, properly considered, is an enemy which the mind assails. One wrestles with a problem, fights to subdue it. Every idea is a victory, every new concept a battle won. He who does not approach a scientific problem like a warrior, who does not go after it with tenacity and cunning, with determination and courage, should never speak of understanding." From numerous personal contacts I know that the scientists of this Department possess these qualifications and are united in the objectives of their respective campaigns to obtain truth and real understanding, as a result of which our citizens may enjoy greater security, prosperity, and happiness. I have no fear for the future of agricultural research. I have an equally confident belief that in the times to come those who are engaged in this work will be held in increasing honor and of the scientist who is faithful to its high traditions it will be said "Many shall commend his (or her) understanding."

In this discussion we have considered somewhat closely the factors which comprise a productive and useful research program. This field of human effort also has, as a distinct asset, that intangible element sometimes known as the spirit of research. Research workers often become so imbued with the spirit of intellectual exploration into new fields that they look upon their retirement with regret. Some even continue their studies at their own expense after separation from the Department. This spirit was described a few years ago by Eugene Davenport, Dean Emeritus of the College of Agriculture, University of Illinois. Speaking before the forty-fifth annual convention of the Association of Land Grant Colleges, Dean Davenport described a modern State college or university in terms which apply also to the U. S. Department of Agriculture. "Such an institution", he stated in part, "is, first of all, a repository of the world's stock of knowledge so far as it is possible to bring it together in available form and so far as means are at hand for the purpose. Second, it is a research institution, provided with specialists and equipment for addition to this stock of knowledge as widely as would be profitable in the development of the State and as fast as resources will permit. Third, it is a source of information on which any man may draw freely and at will."

Let us bear in mind that the research work of this Department and allied institutions is actually helping to bring about a <u>better environment</u>, economically, socially and intellectually, for our people. Such an environment is, and should continue to be, our objective.

Knowing well that "all progress is wrought in the mystic realm of thought", we look to scientific workers to blaze the trail. Yet every other employee who becomes interested in and aids in this activity renders valiant and useful service toward stimulating its progress and increasing its effectiveness.

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OBJECTIVES OF THE REGULATORY WORK OF
THE DEPARTMENT OF AGRICULTURE.

The regulatory work of the Department of Agriculture, in so far as general objectives are concerned, can be divided into four classes: (1) that which is designed primarily to protect the interests of agricultural producers; (2) that which is designed primarily to protect the interests of consumers generally; (3) that which is designed primarily to protect the public interest by the conservation of natural resources; and (4) that which is designed primarily for the humane purpose of preventing cruelty to livestock.

In the expansion of that class of the regulatory work of the Department which is designed primarily to protect the interests of agricultural producers can be traced the development of agriculture as a national problem in the United States. This Department was organized at about the time when two movements of the greatest significance to agriculture were in their early stages. In the first place, the machine age was just beginning. The emergence of mass production in industry greatly increased the population of cities and towns, both in this country and abroad, and this, in turn, resulted in a demand for increases in the production of foods and fibres by the farmers of the United States. Fortunately, the second movement previously referred to took place at about the same time. This was the use of new and improved farm machinery, which revolutionized the methods of producing and

harvesting crops and made it possible for the farmers of this country to meet the demands of the urban populations of the United States and Europe for agricultural commodities. Increased production was the goal of agriculture. When the Department of Agriculture was first organized, therefore, its primary objective was to aid farmers in improving the quality and increasing the quantity of plants and animals. Consequently, the earlier regulatory activities of the Department were designed to protect animals and plants from the spread of disease and insect pests.

One of the earliest of the statutes designed to prevent the spread of disease was the Act of May 29, 1884, which is still in effect and which, by judicial interpretation, has a very narrow scope. The expressed purpose of the act is to prevent the interstate spread of contagious, infectious or communicable diseases of livestock and poultry. However, the statute, as judicially construed, applies to persons moving in interstate commerce livestock or poultry which they know to be diseased only if such persons operate a railroad or vessel or have control of the animals or fowls within an "infected district" concerning the location of which the Secretary of Agriculture has given due notice. As a matter of fact, it is extremely infrequent that the locality from which there has been a shipment of diseased livestock or poultry can be properly termed an "infected district". Furthermore, there is little possibility in many cases of giving a proper

notice about such a district before shipments therefrom are made, because the fact that the district is infected usually is not known until after shipments of the diseased livestock or poultry to other sections of the country have been made. As the only practicable means of attempting to operate effectively under this statute, the Department has given notice that the contagious diseases mentioned in the act exist throughout the entire United States.

A somewhat similar statute is the so-called Animal Quarantine Act of March 3, 1905, which has for its purpose the prevention of the spread of the diseases of livestock and poultry by regulating the interstate movement of such animals from areas which the Secretary has quarantined after he has determined that there are livestock or poultry therein "affected with contagious, infectious or communicable" diseases. The statute prohibits the interstate movement of livestock or poultry from a quarantined area, either by common carrier or by transportation in a private conveyance, or by driving the animals, except in compliance with the rules and regulations of the Secretary.

The Act of February 2, 1903, in section 1, authorizes the Secretary of Agriculture to make such rules and regulations as he may deem necessary concerning the exportation and interstate transportation of livestock from any place within the United States where he may have reason to believe pleuro-pneumonia, foot and mouth disease and other dangerous infectious cattle diseases may exist.

In section 2 of the act, the Secretary is given practically a blanket authority "to make such regulations and to take such measures as he may deem proper" to prevent the introduction or dissemination of the contagion of any contagious, infectious or communicable disease of cattle from a foreign country into the United States, or from one State or Territory to another. The Secretary is also given specific authority as to certain action to be taken by him with reference to hay, straw, forage and meats and other animal products coming from an infected foreign country to the United States or moving in interstate commerce, whenever the Secretary thinks such action is advisable in order to prevent the introduction or spread of infection.

Closely akin to the preceding statutes is Section 306(a) of the Tariff Act of 1930, which prohibits the importation into the United States of certain animals and meats from any foreign country in which the Secretary of Agriculture has determined that rinderpest or foot and mouth disease exists. Some time ago, the question was raised as to whether, under this statute, importation of animals and meats might be permitted from a region or locality which was in fact free of the diseases mentioned in the act, even though the Secretary had determined that the diseases existed in other parts of the country. The question specifically arose as to whether such importations might be made from Patagonia, a region of Argentina, where there was no rinderpest or foot and mouth

disease, although the Secretary had previously determined that these diseases existed elsewhere in Argentina. Both the Solicitor's Office and the Attorney General held that all such importations from Argentina were prohibited by the act, because the expression "foreign country", as used therein, meant the entire entity, and the prohibition against importations therefrom applied to every part of the country.

Along with the statutes previously referred to, which seek to protect the livestock and poultry of the country from the spread of disease, the Department also administers the so-called Plant Quarantine Act, the general objective of which is to prevent the introduction into, and the spread within, the United States of injurious plant diseases and pests. One section of the act provides for the entry, only under permit and under the rules and regulations of the Secretary, of those plants and plant products the unrestricted importation of which the Secretary has determined might result in the entry of injurious plant diseases and pests. Another section provides for the entire exclusion of those plants and plant products the importation of which, according to the Secretary's determination, it is necessary to forbid in order to prevent the introduction of new or not widely prevalent plant diseases or injurious insects. Still another section, which relates only to interstate commerce, authorizes the Secretary to quarantine States or Territories, or parts of them, when he has determined that a quarantine is necessary

to prevent the spread of new or not widely prevalent plant diseases or pests, and makes it unlawful, after the Secretary has promulgated such a determination, to carry from the quarantined area any plant, plant product, stone or quarry product, or any article whatever which is capable of carrying the dangerous plant diseases or pests specified in the quarantine, except in accordance with the rules and regulations of the Secretary.

The Department not only endeavors, through the statutes just discussed, to protect the livestock and crops of the farmer from the spread of disease and insect pests, but the Department also endeavors to see to it that the farmer, in his own efforts to prevent and control animal and plant diseases and insect pests, is not defrauded by the manufacturers of products that are designed to prevent or treat such plant and animal diseases or control such insect pests. In this field, the Department operates under the Insecticide Act and the Virus-Serum-Toxin Control Act. The Insecticide Act provides for the seizure of adulterated or misbranded insecticides and fungicides and for the criminal prosecution of those who transport or sell in interstate commerce such adulterated or misbranded insecticides or fungicides. Under the provisions of the Virus-Serum-Toxin Control Act, the Secretary of Agriculture is empowered to license and supervise the production, and to regulate the importation of and interstate commerce in, viruses, serums, toxins and analogous products intended for use in the treatment of domestic animals.

In connection with the statutes just referred to, the Federal Seed Act should be mentioned. This statute, as originally enacted, was primarily intended to prevent the importation into this country of seeds that were adulterated or unfit for seeding purposes. The statute was subsequently amended so as to prohibit, not only the importation of adulterated seeds, but also to control the transportation, delivery for transportation, sale or offer for sale in interstate commerce of any adulterated or misbranded seeds. The statute provides for the seizure of adulterated or misbranded seeds and for the criminal prosecution of any person who knowingly violates its provisions.

Thus far, under the general heading of regulatory work that is designed to protect the interests of agricultural producers, we have discussed statutes that are related to the specific objective of enabling farmers to increase the quantity and improve the quality of their crops and livestock. We shall now discuss a group of statutes designed primarily to enable the farmer, after having produced his commodities, to market them with knowledge of their probable value by making available to the farmer information concerning the comparative quality of his commodities. One of the first statutes in this group to be enacted by Congress was the Grain Standards Act, which provides for uniformity in the grading of grain. It authorizes the Secretary to establish standards of quality and condition for wheat, corn and other grains. Once standards have been established, no grain sold or offered or

consigned for sale by grade may be shipped or delivered for shipment in interstate or foreign commerce unless the grade named in the transaction is one of the official grades and unless the grain has been inspected and graded by a licensed inspector. Inspectors are required to be licensed and the Secretary is given authority to suspend or revoke the license of any inspector who, after opportunity for a hearing, is found to be incompetent or to have knowingly or carelessly graded grain improperly or by any standard other than one authorized by the act.

The Cotton Standards Act is similar to the Grain Standards Act except that, of course, it provides for the establishment of standards of quality for cotton.

Another statute prescribing standards of quality for agricultural commodities is the Tobacco Inspection Act, which authorizes the Secretary to establish standards for tobacco by which its type, grade, size, condition, or other characteristics may be determined. It provides for two general classes of inspection service - first, a compulsory inspection at markets designated by the Secretary, and, second, a voluntary inspection at the request of the owner of the tobacco or any person financially interested therein. With respect to the first type of inspection service mentioned - that is, the compulsory inspection - the Secretary is authorized to designate the auction markets from which tobacco and the products customarily manufactured therefrom move

in interstate commerce. Before designating any market, he must hold a referendum for determining the wishes of its patrons. After designation, no tobacco may be offered for sale at the market without official inspection and certification, except that the requirement may be suspended by the Secretary because of a lack of competent inspectors or because the volume of business is not large enough to justify the cost of the service.

The Naval Stores Act provides for the promulgation by the Secretary of Agriculture of official standards for rosin and turpentine. All turpentine and rosin shipped in interstate commerce must be sold under or by reference to the United States standards.

The Export Apple and Pear Act authorizes the Secretary to establish standards for apples and pears in packages which are to be shipped to foreign countries. The act makes it unlawful for any person to ship or offer for shipment, or for any carrier or steamship company, or any person, to transport such apples or pears, or to receive them for transportation, unless they are accompanied by a certificate issued under authority of the Secretary of Agriculture, that they meet the requirements of the act. This statute is not designed so much for the purpose of enabling the farmer to market his products with an intelligent appreciation of their comparative quality and, consequently, of their value as to maintain a foreign market for these products. Another similar statute is the Inspection of Dairy Products for Export Act. This statute provides for the inspection and certification as to the purity and quality of dairy products intended for export and the marking, stamping and labeling of such products.

In connection with the group of statutes which we have just discussed and which are designed to aid the farmer in the marketing of his crops, reference should be made to the United States Warehouse Act, which provides for the licensing by the Secretary of Agriculture of warehouses in which agricultural commodities are stored for shipment in interstate commerce. It is purely a voluntary statute in that the owner of a warehouse can make application for a license or not, as he sees fit, and the fact that he does not obtain a license does not prevent him from operating his warehouse. An applicant for a license is required to meet fixed standards of financial ability, graduated according to the volume of business, and to furnish a bond in a commensurate amount for the protection of depositors. Inspectors samplers and weighers are licensed by the Secretary to certificate the grade and weight of any commodity offered for storage. Warehouse receipts, which are required to embody certain detailed information, are negotiable. Licenses issued to warehousemen, inspectors, samplers and weighers may be suspended or revoked by the Secretary, upon due notice and hearing, for failure to comply with the requirements of the act. A false representation that a warehouse is bonded under the act, the alteration of a license, receipt or certificate, the issuance of a false or fraudulent receipt or certificate, or the unlawful removal of goods from a warehouse, is made a criminal offense.

Under a third group of statutes in the first class of regulatory work, the Department, in order to prevent manipulation of the prices of agricultural commodities, and to secure for farmers honest returns for their products, regulates certain middlemen who handle or deal in agricultural commodities. One of the leading statutes in this category is the Packers and Stockyards Act, 1921, which regulates the business conduct of the packers, the large stockyards of the country, and the operators on such yards, in so far as their transactions are in the current of interstate commerce. Title II of the act declares that it is unlawful for any packer: to engage in any unfair, unjustly discriminatory, or deceptive practice or device; to give any unreasonable preference or advantage to any person or locality, or to subject any person or locality to any undue or unreasonable prejudice or disadvantage in any respect whatsoever; to apportion supplies among themselves for an unlawful purpose; or to engage in any conspiracy to violate the act. If the Secretary determines, after a hearing, that the act has been violated by a packer, he may issue what is called a cease and desist order directing the packer to discontinue the unlawful practice.

The stockyards and the operators thereon (commission men and dealers) are dealt with in Title III of the act. Yards that are subject to the provisions of the act are required to be posted by the Secretary, after which every operator thereon must register with the Secretary, giving his name and address and the character of the business in which he is engaged. The Secretary is given power

under the act to prescribe the rates which may be charged for their services by the owners of posted stockyards and by the commission men who operate at such yards. The stockyards and the operators thereon are required to perform reasonable stockyard services and to establish, observe and enforce just, reasonable and non-discriminatory regulations and practices. Cease and desist orders may be issued by the Secretary against stockyard owners or operators who engage in unlawful practices.

Persons injured by any failure upon the part of a commission man or dealer to comply with the provisions of the Packers and Stockyards Act may file a complaint against the violator with the Secretary, who is authorized, after a hearing, to award reparation to the injured party.

A very important amendment to the Packers and Stockyards Act, which was approved on August 14, 1935, makes the act applicable to dealers and handlers of live poultry at large markets specially designated by the Secretary. Such persons are required to be licensed. The license of any person violating the act may be suspended by the Secretary after opportunity for a hearing and may be revoked if the violation is flagrant or repeated.

Another statute in this group is the Perishable Agricultural Commodities Act, which requires the licensing of commission merchants, dealers and brokers handling fresh fruits and vegetables in the current of interstate commerce. It declares certain unfair conduct to be unlawful. The prohibition includes: the making of

fraudulent charges; the dumping or destruction of commodities without reasonable cause; the making of a false or misleading statement in connection with a transaction; the rejection of, or the failure to deliver, a commodity under contract unless there is reasonable cause therefor; the fraudulent representation that a commodity was produced in a State or country other than the one in which it was actually produced; and the fraudulent removal, alteration or tampering with any tag or similar notice placed upon any container or railroad car showing the grade or quality of a commodity or the State or country where it was produced. A license may be suspended for a violation of the act and revoked if the violation is flagrant or repeated. Authority is given the Secretary to award reparation for damages resulting from a violation of the act.

The Produce Agency Act makes it a criminal offense for any person receiving any fruits, vegetables, melons, dairy or poultry products, or any perishable farm products of any kind or character, in interstate commerce, for or on behalf of another, to fail truly and correctly to account therefor, or to make any false report or statement as to the handling or disposition of the same. The statute also makes it a criminal offense to abandon, dump or destroy products without good and sufficient cause.

The Commodity Exchange Act, which was passed June 15, 1936, is the Grain Futures Act of September 21, 1922, as amended, and

regulates the exchanges, commission merchants and brokers who deal in futures contracts covering wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs, and Irish potatoes. The act provides for the elimination of:

(1) Manipulation of the market;
(2) Corners and squeezes.
(3) Excessive speculation.
(4) Buying or selling in excess of fixed trading limits, unless for bona fide hedging purposes.
(5) Cheating and defrauding.
(6) Making of false reports, records, or accounting.
(7) Bucketing of orders.
(8) The secret practice of commission merchants taking the opposite end of their customer's trades.
(9) Short notice of delivery to the buyer's detriment.

The Secretary of Agriculture is given broad powers to promulgate such rules and regulations as "are reasonably necessary to effectuate any of the provisions or to accomplish any of the purposes of the act." The act also creates a commission, composed of the Secretary of Agriculture, as chairman, the Attorney General, and the Secretary of Commerce, with power, after a hearing, to place a trading limit upon the transactions of any one person in any commodity for any one day of trading, and to limit the speculative net position of any person.

Boards of Trade, upon application to the Secretary, are designated as "contract markets" when they meet certain requirements that are specified in the act. Violations of the act or of the rules and regulations of the Secretary of Agriculture may result in

an order by the commission suspending or revoking the designation of the board of trade as a "contract market" or in an order to cease and desist from the particular violation.

Commission merchants and floor brokers are required to register with the Secretary of Agriculture. For a violation of the act or of the rules by any registrant, an order of suspension or revocation may be made by the Secretary after notice and hearing. This would deprive him of the right to trade on any contract market.

Another statute which regulates trading in futures is the United States Cotton Futures Act of August 11, 1916, which lays a tax in the nature of an excise tax of two cents upon each pound of cotton involved in any contract of sale of cotton for future delivery upon any exchange, board of trade, or similar institution or place of business unless one of three different types of contract is used. The provisions of each type of contract are set forth in detail in the statute. While three forms of contract are authorized, only one is in actual use. It makes middling cotton the basis grade, unless otherwise specified, requires classification according to the official standards, and provides for settlement by payment of actual commercial differences if cotton other than the basis grade is delivered. The purpose of specifying the different types of contract is to enable the buyer to know what he will get if he decides or is required to take delivery, and to enable the seller to know what he must deliver if delivery must be made under the contract.

Greater market stability is thus secured and better prices are reflected back to the producer.

In another group of regulatory statutes designed to protect the interests of agricultural producers can be seen the most recent efforts by the Federal Government to aid the farmers of the country in connection with the marketing of their products. These statutes deal with the most modern of agricultural problems - namely, the problem of establishing and maintaining fair prices by providing for the orderly marketing of agricultural commodities. The chief of these statutes is the Agricultural Adjustment Act. As most followers of recent Federal legislation are aware, the Agricultural Adjustment Act, in its marketing regulation features (which were not involved in the Hoosac Mills decision), represents a considered departure from conventional interpretations of constitutional law and administrative law and a reorientation of the role of the Federal Government in regulating economic enterprise. This particular discussion is concerned solely with those sections of the Agricultural Adjustment Act, and supplementary legislation, which have as their purpose the regulation of the handling of agricultural commodities in interstate and foreign commerce in order to balance and order markets. Such regulation represents, from a legal point of view, one means, separate and distinct from other means provided in the Agricultural Adjustment Act, to achieve the objective of

Congress, which may be stated briefly as follows:- promoting the general welfare by obtaining for the producers of agricultural commodities a "parity price" for their products.

Since the objective of the regulation is to obtain for farmers a fair price for agricultural commodities, it is proper briefly to analyze and characterize the concept, "parity price", first introduced into the legislation of this country by these related acts. It is to be noted that, except for the case of milk and its products, the legislation does not provide for price fixing. Furthermore, "parity price" is not a public utility concept and has no relationship to a present fair and reasonable return for the production of a commodity based upon a study of present cost of production. Congress believed that during a certain period in the recent past, farm income and city income were more nearly balanced than at the time of the enactment of the Agricultural Adjustment Act and that the unbalanced income of the farmer for certain agricultural products should be adjusted and balanced. The Agricultural Adjustment Act, therefore, provided for base periods which, for most commodities, was the prewar period, August 1909 to July 1914. "Parity price", in short, is the standard to be applied in taking administrative action under the Agricultural Adjustment Act. When the current price is below "parity price" as computed, action is permitted. When the commodity price is above "parity price", action is not permitted. "Parity price" draws the

boundary lines around the range in which administrative action is legally permissable: the Secretary is directed to move the price from its current level to its outermost legal limit, the "parity price", and thereafter maintain the price at parity. It follows that the administrative agency has no objective other than to compute and thereafter to realize and maintain a mathematical figure declared by Congress to be both the reason for, and the limitation upon, administrative action. The Secretary is not empowered to determine what a fair and reasonable return is. He is compelled to act to realize the price ascertained according to the formula provided, based upon such data as may be available.

The regulatory mechanisms provided in the Agricultural Adjustment Act for the establishment and maintenance of parity price are, first, marketing agreements between the Secretary of Agriculture and the handlers of agricultural products in interstate and foreign commerce, which, being voluntary, carry with them the legal attributes of trade contracts. Second, orders issued by the Secretary of Agriculture. Orders may be issued only with respect to a limited and enumerated group of agricultural commodities or products. They are binding upon all handlers of the commodities in the current of interstate or foreign commerce. The orders issued by the Secretary limit the amount of the commodities covered by such orders which may be shipped or marketed in interstate or foreign commerce, thereby

adjusting the supply of the commodities to the demand in the particular market. In addition to these instruments of regulation, provisions are made for the limitation of imports of agricultural commodities or products into the United States where importation may nullify or inhibit a domestic program.

The Agricultural Adjustment Act incorporates various innovations in administrative procedure. The agencies which administer the terms of a marketing agreement or order are usually selected by the members of the industry itself. They are clothed with certain powers, but their acts are subject to strict supervision, approval and veto by the Secretary of Agriculture. Provisions are customarily made for assessments upon members of the industry to meet the expense of the administration of the instrument.

Provisions of the Agricultural Adjustment Act require, under certain specified conditions, that prior to the issuance of an order the producers of the commodity must be favorable thereto. Producers may also cause the termination of the order or marketing agreement by indicating that they no longer desire its operation in the industry. But producers themselves are not regulated. They are not controlled.

Another statute which should be considered in connection with the Agricultural Adjustment Act is the Jones-Costigan Sugar Act. Under this act the Secretary of Agriculture is authorized to establish quotas for the importation of sugar from the territories and possessions of the United States, from the Commonwealth of the

Philippine Islands, and from foreign countries, including Cuba, and for the marketing in interstate commerce of sugar produced in the United States. The original objective of the quota provisions of the act was the establishment and maintenance of such a balance between production and consumption of sugar beets and sugarcane, and the products thereof, as would establish and maintain for farmers parity prices for their sugarcane and sugar beets. In attempting to reestablish and maintain parity prices to farmers, the Secretary was required to give due consideration to the welfare of domestic producers and to the protection of domestic consumers and to a just relation between the prices received by domestic producers and those paid by domestic consumers. With those provisions of the act in mind, the Secretary established yearly quotas for off-shore areas and for foreign countries, and from time to time made adjustments in such quotas and in those established in the act for the continental United States, as required by the act.

Following the decision of the Supreme Court in United States v. Butler, Congress enacted Public Resolution No. 109, in which it was stated that

> "In order to regulate commerce ..... the quotas for the respective sugar-producing areas shall be the same (subject to modification or adjustment by the Secretary of Agriculture under conditions set out in such Act) for the calendar years 1936 and 1937 as those initially established by the Secretary of Agriculture for the calendar year 1936: . . . ."

It is, therefore, no longer the purpose of the act to reestablish and maintain parity prices for farmers. However, in enacting Public Resolution No. 109, it appears that Congress intended to leave intact the provisions of the Jones-Costigan Act requiring the Secretary to give due consideration to the welfare of domestic producers and to the protection of domestic consumers and to a just relation between the prices received by the former and the prices paid by the latter.

The class of regulatory work which we have previously discussed had for its general objective, and each of the statutes discussed was designed primarily to, protect the interests of the farmers of the country. We shall now discuss a class of regulatory work handled by the Department which is designed primarily to protect the interests of consumers.

Among the statutes that fall in this category is the Food and Drugs Act. This statute prohibits the importation of and interstate commerce in adulterated or misbranded manufactured or natural foods, beverages, stock feeds, remedies, drugs and medicines. The volume and value of the food and drug products that annually enter interstate commerce and that are imported into this country are enormous. For example, in 1933, drugs valued in excess of one-half billion dollars and foods valued at nearly seven billion dollars were produced in this country and the bulk of them were shipped in interstate commerce.

The act provides for the criminal prosecution of any person violating its provisions and for the seizure of adulterated or misbranded products. Seizure actions are reported to in the following

classes of violations: (1) food products containing added poisonous or other added deleterious ingredients which may be harmful to health; (2) food products consisting in whole or in part of filthy, decomposed, or putrid animal or vegetable substances, or any portion of an animal unfit for food, or a product of a diseased animal or of an animal that has died otherwise than by slaughter; (3) drugs bearing false and fraudulent labeling with respect to their curative or therapeutic effects; (4) food or drug products so grossly misbranded with false and misleading representations that their distribution constitutes a serious imposition upon the public; and (5) adulterated and misbranded food products which seriously demoralize legitimate trade practices. This law is also designed to prevent the importation of adulterated and misbranded foods and drugs into this country.

In connection with the operation of the statute, it may be interesting to disclose that under no circumstances are food or drug products which have been seized and condemned as being in violation of the act released for redistribution in their adulterated or misbranded condition. In the case of misbranded articles, it frequently happens that relabeling will render them entirely legal and suitable for distribution to the public. In the case of shipments seized because of decomposition or the presence of deleterious ingredients, it is usually a fact that only a portion of the shipment is adulterated and the unadulterated portion may be salvaged. In some types of products, as in fruits

that have been subjected to lead-arsenate sprays, the surface contamination that exists can be removed by washing. Where it is possible by adequate sorting, washing, or cleaning operations, to correct the adulteration and render the product entirely suitable for distribution to the public, the courts frequently do not order the destruction of the entire shipment but instead take advantage of the authority granted by the law to release the goods under bond for reconditioning under governmental supervision. Unfit material is invariably destroyed or denatured in such a way as to make it impossible to utilize the product for food or drug purposes.

The McNary-Mapes amendment to the Food and Drugs Act, passed in 1930, gives the Secretary of Agriculture the authority to set up one legal standard of quality for each class of canned foods packed in hermetically sealed containers and sterilized by heat, and to prescribe a clearly informative labeling for each product not meeting the standard. A similar provision is made for standards governing the fill of containers. Canned meat products and canned milk are excepted by the provisions of the amendment.

The Federal Caustic Poison Act requires that certain specified caustic or corrosive substances and their preparations be labeled with precautionary information. Under its provisions, the shipment, delivery for shipment, or receipt from shipment, in interstate or foreign commerce, of any dangerous caustic or corrosive substance, for sale or exchange, or their sale in any territory or possession, or within the District of Columbia, in

misbranded packages or containers suitable for household use is prohibited.

The Federal Import Milk Act is designed to prevent the importation of milk and cream into the United States that does not meet the health requirements specifically designated therein. Under its provisions, all milk and cream offered for importation must be examined and approved prior to entry. Permits authorizing the entry of such commodities are not issued until satisfactory proof is presented of the sound health of the producing animals and of the sanitary conditions of the originating dairy farms and pasteurizing plants.

The Tea Inspection Act, which is also a statute in regulation of foreign commerce, provides that all shipments of tea offered for entry into the United States must be sampled and examined in order to exclude impure or unwholesome tea. Samples of teas offered for import are compared with standard samples selected by the United States Board of Tea Experts and made official by approval of the Secretary of Agriculture. Teas failing to comply with these standards are automatically excluded from entry into this country.

The Filled Milk Act prohibits the manufacture and shipment, or delivery for shipment, in interstate commerce of any milk, cream, or skimmed milk containing fat, other than milk fat, which has been added by any of the methods described in the statute.

The Renovated Butter Act provides for the supervision of the labeling of processed or renovated butter and the sanitary inspection of establishments where renovated butter is made.

Another statute in this general class, the Meat Inspection Act, is of great importance. From an historical standpoint, it is unique. Prior to 1906, there was no Federal regulation involving meats or meat products designed for consumption in this country. Upton Sinclair, in his book, "The Jungle", pointed out many evils that existed in connection with the preparation and treatment of meats and meat products. While many of the statements contained in Sinclair's book were found to be exaggerated, investigators who looked into the conditions complained of discovered that many unsanitary practices were prevalent in the great meat packing establishments. Congress, in compliance with the great popular demand that then existed for remedial legislation, passed the Meat Inspection Act. At the present time, more than 60% of the meats consumed by the people of the United States bear the mark of Federal inspection. Statistics disclose that during the period beginning July 1, 1933, and ending June 30, 1934, 8,570,650,139 lbs. of meat and meat food products were inspected by the Department. The public knows that this Federal mark of inspection is the badge of their protection insofar as meats and meat products are concerned. The system of inspection employed by the Department is recognized as being one of the most comprehensive

and complete in the world. This act, as has been previously indicated, is primarily a health measure designed to guard the public against the imposition of unwholesome meats and meat food products, and provides in general for the maintenance by the Department of a system of inspection of meat packing establishments in which cattle, sheep, swine, or goats are slaughtered and the carcasses or meat food products of which are prepared for shipment in interstate or foreign commerce. The shipment or transportation of these articles of food in either interstate or foreign commerce is prohibited unless they bear the mark of Federal inspection and approval as required by the law.

The Department, in its enforcement of the provisions of the Imported Meat Act, has supervision over imported fresh beef, veal, mutton, lamb, pork, bacon and ham, and prepared or preserved meats of all kinds that are imported into this country. The entry of such meats is prohibited unless they are healthful, wholesome, and fit for human food, and contain no dye, chemical, preservative, or ingredient that may render them unwholesome or unfit for human consumption. Supervision is likewise exercised over horse meat and horse meat products in compliance with the provisions of the Horse Meat Act. Such meats must be plainly and conspicuously labeled, marked, branded, or tagged "horse meat" or "horse meat products".

The Standard Container Acts of 1916 and 1928, which establish standards for containers for fruits and vegetables, are designed wholly to protect the economic interests of consumers. The 1916 act deals with climax baskets, berry boxes and similar containers for small fruits and vegetables. The 1928 act deals with the larger containers known as hampers, round stave baskets and splint baskets. The 1916 act is specifically limited to containers moving in interstate commerce, but the 1928 act is of general application. The Secretary is authorized to prescribe tolerances and to make examinations and tests for the purpose of determining whether containers meet the requirements of the act. The manufacture, shipment, or sale of containers not conforming to the standards is prohibited. Also, the illegal containers are themselves subject to seizure and condemnation.

The third class of the regulatory work of the Department is designed to protect the public interest by the conservation of natural resources. This class of regulatory work includes, among other things, the regulation of the national forests. No provision for their administration was made until 1897, when there was included in the Sundry Civil Appropriation Act authority for the Secretary of the Interior to make provision for protecting them against destruction by fire and depredations and to make such rules and regulations and to establish such service as would insure the objects of the reservations, namely, to regulate their occupancy and use and to preserve the forests thereon from destruction. Any violation of the rules and regulations is made a criminal offense. Administration

of the forests was transferred from the Secretary of the Interior to the Secretary of Agriculture by the Transfer Act of February 1, 1905.

The Department's regulatory work which is designed to conserve natural resources also includes a group of statutes which seek to preserve and protect the wild life of the nation. One of the statutes in this group is the Migratory Bird Treaty Act of July 3, 1918. This act, as the name implies, was passed for the purpose of giving force to the treaty of August 16, 1916, between the United States and Great Britain for the protection of migratory birds in the United States and Canada. The purposes and objectives of the treaty and of the act, as expressly set forth in the proclamation of President Wilson of December 8, 1916, making public the treaty, are the protection from indiscriminate slaughter, and the preservation during the nesting season or while on their way to and from their breeding grounds, of migratory birds which are either useful to man or harmless; and especially the protection of those which are of great value as food or in destroying insects injurious to forests, forage plants, and agricultural crops.

The Migratory Bird Conservation Act is a second act in furtherance of the purposes of the Migratory Bird Treaty. Under this act the Secretary has power to acquire land for refuges for migratory birds, and then to make regulations governing the administration of such land. The dominating intent is to provide havens for the birds which will be available to them when drainage or other causes have destroyed other places of refuge. The refuges

also provide a place where the birds may breed unmolested, and thus augment the regular supply. In its regulatory aspects, the act aims principally to prevent violations of the sanctuaries by hunting, trapping or entering the refuge for any unauthorized purposes.

Under the Upper Mississippi River Wild Life and Fish Refuge Act, the Secretary is given power to acquire areas of land or water lying along the Mississippi River between Rock Island, Illinois and Wabasha, Minnesota, a distance of approximately 280 to 300 miles, for the setting up of the Upper Mississippi River Wild Life and Fish Refuge. The extent of the refuge on either side of the river is limited only by the proviso that the lands used shall be non-agricultural, and the average potential width of the area is thus 1 1/2 to 2 miles, but in some places it is as wide as 3 or 4 miles, making a possible refuge area of over 500 square miles. In its regulatory aspect, the act prohibits the entry upon the refuge or the interference with any bird, animal or plant life thereon contrary to the regulations promulgated for the refuge.

The Bird and Animal Reservation Trespass Act is entirely criminal in nature, providing a penalty for the hunting, trapping, capturing, wilfully disturbing, or killing of any bird or wild animal, or the disturbing of any bird eggs, on any of the bird or animal reservations of the United States, except under the rules and regulations of the Secretary of Agriculture. The clear purpose of this act, therefore, is to provide that the game and bird sanctuaries of the United States shall be inviolate.

The declared purpose of the Migratory Bird Hunting Stamp Act is to provide funds for the acquisition and administration of migratory bird sanctuaries under the Migratory Bird Conservation Act, for the protection of certain migratory birds, and for the enforcement of the Migratory Bird Treaty Act. The act chiefly provides that hunters of waterfowl must have in their possession a one-dollar migratory bird stamp procured for the current year. There thus results a substantial revenue, 90% of which is to be available for the location, ascertainment, acquisition, and administration of refuges frequented by migratory birds. The remaining 10% is to be used for the expenses of administering the act.

The purpose of the Lacey Act is to assist the States in the enforcement of local game and bird laws by prohibiting the transportation in interstate commerce of wild animals or birds, or the dead bodies or eggs thereof, when such wild life has been captured, taken killed, purchased, sold, or possessed in violation of State or Federal law. The importation of wild life which has been procured or made the subject of exchange in any way contrary to foreign law is also prohibited, and no importation of any foreign animal or bird is permitted except in accordance with the regulations of the Secretary of Agriculture.

The Department also administers the Alaska Game Laws, the general purpose of which is to provide a system of regulation and control of the hunting of game and birds in Alaska. The Alaska Game Commission is set up, composed of five members. Four of them are appointed by the Secretary of Agriculture, one from each of the four

judicial divisions of the Territory, and are not Federal employees. The fifth member is a representative of the Bureau of Biological Survey who is a resident in Alaska, and he is the Executive Officer and Fiscal Agent of the Commission. The Secretary of Agriculture has the power, upon consultation with or recommendation of the commission, to make regulations for the hunting and killing of game animals and birds.

The fourth and final class of the regulatory work done by this Department is performed under the so-called 28-Hour Law, and has for its principal objective the humane purpose of preventing "cruelty to animals while in transit by railroad or other means of transportation" in interstate commerce, as stated in the title of the act. The words " by railroad or other means of transportation" are not as broad as they sound at first, for the body of the act makes it plain that the only transporting agencies which are subject to the provisions of the act are vessels, railroads, express companies, car companies, and other common carriers. The statute prohibits common carriers from confining animals, in the course of interstate transportation, for a longer period than twenty-eight consecutive hours without unloading the same in a humane manner into properly equipped pens for rest, water and feeding for a period of at least five consecutive hours. Carriers are not subject to the penalty provided in the act if they are prevented from complying with its requirements by storm or by other accidental or unavoidable causes which cannot be anticipated or avoided by the exercise of due diligence and foresight.

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UNITED STATES DEPARTMENT OF AGRICULTURE

GRADUATE SCHOOL

NATIONAL LAND POLICY

By L. C. Gray, Assistant Administrator
Resettlement Administration

Address, Department of Agriculture Auditorium, December 4, 1936

The development of the agricultural work of the federal government, of which this department is the center, has been marked by five main phases since the founding of the original Agricultural Commission in 1862. The first phase was an effort through research to help the individual farmer improve the technical processes of crop and livestock production. In course of time we entered a second stage of agricultural policy: an effort to help the individual farmer in regard to the economic aspects of farm management. Some years later interest developed in the endeavor to improve the marketing and credit facilities under which farmers marketed their crops and obtained credit.

Then in 1933, with the incoming of the New Deal, agricultural work assumed a fourth aspect. For the first time since its beginning, except for the abortive program of the Farm Board, the efforts of the government to help the farmer became related to agricultural production as a whole. It marked the acceptance of a social point of view along with the older, and proper, attention to individual needs. For the first time the government undertook to aid the farmers to regularize production.

This social point of view arose primarily because the American people finally realized, under the influence of the depression, what some of us had talked about for decades: that the interests of the farmer were not divorced from the interests of the nation as a whole, and that national prosperity demanded a national treatment of the problem of adjusting farm production to market requirements as one of the basic elements in our national economic scheme of things.

The New Deal must also be credited with initiating a fifth stage of national agricultural policy which has come to be recognized as essential to any well-rounded program for the maintenance of a sound rural civilization. An essential basis of such a civilization is an agricultural land policy that will assure proper land utilization and a stable form of land tenure. During recent years diaster has taught the nation a lesson that could come by no other means. The droughts of 1934 and 1936, the devastation of portions of the western plains by wind, and the washing away of the topsoil from the farms of north, south, east and west, have shown the American people in concrete form how problems of land utilization strike at the very foundation of American civilization.

Thirty years ago the United States became aware of the terrible destruction of its forest and mineral resources, and took initial action to conserve the forest and mineral wealth that yet remained to be saved. Now the American people are also learning of the undermining of our agricultural land resources, and the impoverishment of millions of rural people. Again, they are taking steps to stop this waste of land and human resources, and arming to protect these basic resources.

The threat to the very existence of our land resources is responsible not only for increased public concern over land problems, but is gradually effecting as well a shift in emphasis in the agricultural policy of the federal government. Today the major agricultural programs, particularly those which have been initiated during the Roosevelt administration, are focused upon a new center: that of better land use. Most of the major developments in our agricultural policy during the years 1933 to the present exemplify this. First, came the Soil Conservation program, which has launched a nation-wide drive against the waste of soil. Then, the Taylor Act closed the public domain to further homesteading, and pronounced as it were, the lohg overdue last rites on the grave of an outworn land policy. Then, came the land utilization and settlement programs that have been included in the activities of the Resettlement Administration. We have seen the original agricultural adjustment program replaced by one in which the emphasis is upon soil conservation, and the President has recently appointed committees to draft long term programs for readjustment of land use in the Great Plains, and for the correction of the major evils of our system of agricultural land tenure.

The tremendous contrast between the nature of these activities and anything which the government has done before this is obvious. It emphasizes the fact that previous to the New Deal, the most characteristic thing about our land policy was the absence of any constructive program to guide agricultural land use into channels that would at least avoid some of the worst mistakes that have been made.

The seemingly endless resources of land, water, soil, forests, and grass stimulated the hope of the American people that their traditional dream of a land of family-owned farms - which have been and will continue to be the backbone of our democracy - was within their realization. But the same abundance of natural wealth blinded the people to any understanding that the realization of this dream demanded more than the generous distribution of land to settlers. With all its shortcomings, the Homestead Act did aim at the realization of this purpose. But, partly due to its abuse in application, and even more due to the complete lack in the policy of any provision other than the distribution of all land into private hands without any restriction as to use or disposition, the policy was bound to fail in this ultimate objective.

The older land policy of the United States, including the Homestead Policy, was unrealistic in three major respects. First, it failed to recognize adequately differences between the lands of various regions.

It carried over into the semi-arid plains, for instance, the provisions that presupposed a type of farming and size of farm developed in the humid middle west. Secondly, the older land policy, until the end of the 19th century, recognized no need for conservation of land resources and conferred an absolute right of use or abuse. Finally, this policy failed to insure a consistent connection between ownership and use. It permitted enormous areas of land to be purchased by speculators, thus nullifying much of the purpose of the homestead program. It failed to safeguard the maintenance of farm ownership after it had been once established.

After giving away some 278,000,000 acres in homesteads, and selling and granting additional millions to individuals, railroads, and states, we can see the tragic results of this past failure to understand more realistically what factors are involved in the sound use of land. Millions of acres of forest and pasture have been devastated, inflicting poverty upon large populations. Farm families throughout large portions of the United States - where settlements have "just growed" - are living upon land that under normal conditions cannot yield them a living. And in place of a nation of independent farm owners, we have a constantly growing percentage of farmers reduced to a tenant status, with uncounted others possessing only a fictional equity in the land they till.

After spending years of effort and millions of dollars in improving the technical methods of farm production, and in devising better methods of marketing the farmer's products, we now have more than 900,000 farm families in the United States with gross incomes under $400 per year. After giving away free more than a quarter of the farmland in the United States we find over 42 percent of our farm families tenants. What we once thought were limitless resources of land and water, we now see literally running away together from beneath our eyes. Our perplexity may well parallel that of the amateur flute player who when chided by his long-suffering housemates, said "I blow in so beautiful, and it comes out so bad."

Obviously, we have left something out of consideration, and now we are learning what that something was. It has been our fault that we have failed to give due recognition to the significance of the way in which we use the land, the pattern of land holdings, and the systems of tenure which have so important an effect upon the success or failure of farm enterprises and upon the wealth or poverty of community life.

Interest is rightly now being particularly concentrated upon land use problems in the Great Plains, and conditions in this area may well be taken as an illustration of the nature of our national land problems, their causes, and some probable methods of correcting the maladjustments that now exist.

The tragedy of the Great Plains is by now a well told story. Its suffering has been made known to every corner of the nation, and its devastated land has been symbolized by the dust storms which covered the continent last spring. Conditions in the region are strikingly emphasized by a report on one county in the southwest recently

surveyed. Since 1930 the population of this county has declined 50 percent. There remain now only 1038 operating farms and ranches in a total area of 1,633,363 acres. There are over 1800 abandoned homes. Federal subsidies and loans made in this county since 1933 average approximately $4,000 per farm unit, or $4.50 per acre, which is about 100 percent of the present land value.

The facts are evident enough: waste of land, waste of money, and waste of human life. What are some of the causes of these conditions in that great area covering some 400,000,000 acres of upland America?

First is the use of much land for arable farming that because of insufficient rainfall or moisture-holding capacity, is unsuited to that use. Tradition in one part of the southwestern dust bowl tells of an old Indian who watched a white settler plowing up the virgin sod. Shaking his head in a portentous manner, the old redskin said, "Wrong side up, white man." The tradition does not tell us which party was right or wrong in this particular case, but there is no doubt, that on millions of acres in the high plains, the sod should have been left with its face to the sky.

The individual settler should hardly be blamed for this mistreatment of the land. Before it was tested, no man could say with anything but a guess what the land was good for. Throughout the high plains we find the arable land mixed in with the tracts suited only to grazing. The fault lay with a land policy that failed to recognize any differences, and allowed people to bank on the virtual endorsement by the government of land not suited to farming.

A second factor of importance in the present situation is the existence of a large number of holdings of insufficient size. Unsuited to grain farming in many cases, they do not contain enough land to graze the necessary number of cattle to enable the farm or ranch to maintain a family. Here again our past land policy was at fault in limiting the acreage that could be homesteaded to 160, 320, or for grazing purposes, 640 acres, when actual land conditions in the majority of instances required larger tracts. These small holdings have contributed greatly to the over-grazing of the range, and the consequent erosion of the earth that became thus exposed to the wind.

Waste of the grass has been paralleled with a waste of water that comes as a great surprise to those who have considered water, like the air, to be unlimited. Not only has the drainage of sloughs and ponds reduced the amount of surface water, but wasteful tapping of artesian water in some localities has reduced this supply to a dangerous level, decreasing seriously the flow in deep wells.

The high plains have suffered as well from one of the ailments common to many aspects of American economic life - absentee ownership and speculation. The particular enemy of the hardworking resident farmer of the high plains is the "suitcase" farmer who lives in the city, sows his grain if the prospect looks good, and then abandons his

land to the weather. Unprotected land begins to blow, covering the neighbor's fields, and cutting into his grass. The devastation created by this irresponsible type of ownership is one of the big problems with which the high plains farmers are wrestling, and there is no easy way to victory.

I have just returned from a trip through the high plains where the President's Great Plains Committee, appointed to draw up a long-term program of rehabilitation, has held hearings to get the first hand opinions of local people in regard to their problems. At the first meeting, held in Dalhart, Texas, about 1,000 farmers and ranchers gathered from five states and spoke their minds freely during two days of open meetings. The outstanding thing about these hearings was the evidence they gave of the new attitude in the farmers' minds, and their recognition of the basic problems with which they had to cope. What they talked about would astonish anyone familiar with farm opinion five years ago and who had not had the opportunity of keeping in touch with changes since then.

Man after man who got up in that meeting showed clearly that his thinking had progressed far beyond the borders of his own farm. They spoke of this problem of absentee ownership, and suggested different methods of attacking it. They talked of the necessity for deferred grazing on privately owned range. They insisted that a plan should be worked out for the cooperative building of dams and stock reservoirs to hold the precious rainwater. They urged a wider program of public land purchase, provided it was based upon sould land use adjustment plans. They saw that it was impossible to continue the present system of heavy subsidies and unguided credit extension, and pointed out the need for bringing credit policies into line with good land use. I cite these instances merely to show how, in the high plains, opinion at the grassroots has taken a sharp turn towards a wider horizon under the stress of severe circumstances.

The Committee on the Great Plains has not yet submitted its final report to the President, but its preliminary report made in August of this year has indicated the necessity for an integrated program of better land and water use to correct these manifold maladjustments. There is no magic word that will solve all problems at one swoop. Nor is there any one policy that can be of equal importance throughout the area, for conditions, and consequently the types of adjustments required, vary from county to county.

There will undoubtedly by some public purchase of land in many localities - not as an end in itself, but as a necessary means of returning cultivated land to grass, or of establishing large grazing districts. Unquestionably there will be increased work in water conservation, in building small dams and reservoirs, and in introducing better tillage methods that will conserve the rainfall and soil. Some resettlement of families will be necessary, not evacuating large areas, but regrouping the population within certain areas so as to make the best use of the resources of soil and water that are available. Various localities require other adjustments.

Some attempt has already been made by the Resettlement Administration in its joint land use and rural resettlement activities, to carry out needed adjustments of this nature. In northeastern Montana, for example, there is the Milk River land utilization project, the center of a 13,000,000 acre area of land which has suffered badly from the effects of repeated drought, over-grazing and the cultivation of land unsuited to arable farming. In this project area the Resettlement Administration is purchasing slightly less than 1,000,000 acres of overgrazed pasture, abandoned homesteads, and submarginal crop land in three counties. This land is being improved by relief labor through the building of stock reservoirs and better fencing. For a time grazing is being deferred in order to allow the grass a chance to come back. When the rehabilitation of this range has progressed sufficiently, the land will be leased to cooperative grazing associations which will also lease public domain tracts and other lands lying within the boundaries of the project. Through the operation of the Montana Grazing Association Law, this area will be employed by the cooperative grazing associations subject to the requirements of conservation and rehabilitation.

A third important step in the program in this project area is the development of resettlement opportunities for some of the families who have heretofore occupied the lands now being included in the new grazing areas. About 440 families will participate in this readjustment. Some are being helped to acquire small irrigated tracts in the Milk River district for intensive cultivation. Others are being aided in obtaining sufficient good farmland to produce winter feed and hay for cattle which they will run on the grazing lands leased to cooperative associations. Few will have to remove outside of the general area in which they have been living. Many of the families who have sold their farms to the government have already moved to new homes without further help.

In this manner, through the combined operation of federal, state and local programs - for the Milk River readjustment program is based upon plans initiated locally before the recent drought appeared - the rehabilitation of this area is being effected. Better land use is the core of the program: but better land use covers a multitude of factors. It means the guidance of public land purchase, improved credit, range and farm development, and farm management programs in accordance with the physical and economic character of the land.

I have mentioned before how the problem of absentee ownership and farm tenancy has appeared time and again in the discussions of a program for the high plains. Tenancy is, of course, a nation-wide problem and cannot be considered separately for any one area.

If we can learn anything from our past experience it is the fallacy of believing that farm families can be established in a permanent ownership by giving them cheap land, or cheap credit with which to buy land. Thr 2,800,000 tenant farmers in the United States today, who have come to their present status in spite of the easy land policy of the past, stand as witnesses to that fact.

What, after all, is our purpose in wishing to curb the trend towards tenancy as opposed to farm ownership? There is no intrinsic weakness in tenancy that condemns it in every case. Many tenant farmers have found that form of tenure well suited to their needs and resources. Likewise, many farm owners have found the burdens of debt which they assumed as the price of ownership, to be so heavy as to throw in doubt the value of their equity. What we want to change is not tenancy as such, but the insecurity of tenure that is implicit in farm tenancy as it exists in most cases.

We are only now beginning to understand the direct connection between farm tenancy and such basic social problems as soil erosion, the depletion of rich farmlands through improper handling, the occupation of submarginal lands, and the undermining of rural institutions. Let us not blindly assume that what we want is to supplant our present form of farm tenancy with our present form of ownership. Such ownership may easily be but the first part of a new cycle of debt and foreclosure that leads back to the same tenancy problem all over again. What we really need is a form of land tenure that will give to the operator a security in the occupancy of his land, and that will stimulate him to conserve the resources of the land which he has acquired.

In the Resettlement projects now being carried out a new form of tenure contract has been drawn up which it is hoped will go far towards attaining these objectives. I cite them illustrative of the type of thinking which will be necessary if we are to face the problem of farm tenancy in a realistic manner as part of a realistic land policy.

When a farmer is selected for a resettlement farm, he is given a five year lease. This lease, which runs for a longer period than most farm leases, is considered as a trial period during which the farmer proves his ability and willingness to handle his farm in a sound manner. At the end of this trial period, the farmer is given a choice of two alternatives. He can if he wishes, renew the lease, this time for a 20 year period. Or, if he prefers, he can with the consent of the government, enter into a contract to purchase the property. The purchase contract calls for payments over a forty year period. The government will not accept the last payment in advance, so that during the forty year term, his land is subject to being used in accordance with the terms of the contract and cannot be mortgaged or sold, without consent of the Government, thereby preventing land speculation and loss of the holding through foreclosure. At the same time certain covenants in the contract make it possible for the purchaser to dispose of it, if it should be necessary for him to leave the holding, including recovery of reasonable return for such improvements as he may have made.

The long term renewable lease, and the purchase contract obviously satisfy the first requirement mentioned a few minutes ago: that the form of tenure should guarantee to the operator a reasonable security of occupancy. In addition, however, there are clauses in both the leases and the purchase contract which require the farmer to follow a sound farm management program, and to conserve the resources of soil, grass

and forest which are found on his property. Neglect of the land that results in gullying or wind erosion, or the wanton cutting of trees or overgrazing of pasture, would thus jeopardize the farmer's tenure. On the other hand, the government agrees to recompense him for improvements made in the farm, provided those improvements are agreed to beforehand as being desirable.

The lease and contract which I have just described are being used as the tenure plan for one thousand tenant farmers who have been selected in the Southern States by the Resettlement Administration to be helped to acquire farms of their own.

As I have mentioned several times, the work of formulating and carrying out our new land policy for the rehabilitation of agriculture is already well under way. Often we have to start into action before we can see our way fully to the end of the road, and in so doing we find that our attempts to proceed in the right direction help make the way clear.

One thing that has become increasingly obvious is the need for close integration of the different functional activities involved in the realization of a sound land policy. Land purchase for the conversion of submarginal land to grazing areas and forests or to range use was at first undertaken as a function separate from other government activity. Now we see the futility of attempting any sound land purchase program that does not include a resettlement program for families who are to move from the tracts so acquired. It is of the utmost importance to coordinate both these activities with a land development program. Rehabilitation loans, and other forms of conditional and supervised credit should be tied to a sound land use classification and planning program if the mistakes of our past are to be avoided in this respect. Furthermore, rehabilitation in place may be one of its essential steps in dealing constructively with the problem of tenancy - the first step, so to speak, up the tenure ladder. As the program progresses, the need for centering all agricultural rehabilitation activities around the pole of land planning and land policy becomes increasingly clear.

Perhaps the simplest explanation of the reason for emphasizing this is to point out that our earlier agricultural work could hardly be centered around a land policy, since there was to all intents and purposes no land policy of any consequence. Today with a more conscious objective in mind, we are able to see the connection. What we want above all else to achieve is a rural life that is based upon security of tenure, economic stability, conservation of resources, and a well knit community life. In that light, the economic relationship between the private owner and his land becomes an outstanding feature of our agricultural picture. To adjust this relationship to the needs of the nation as a whole is the purpose of the new agricultural land policy which we are gradually hammering out on the anvil of experience.

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UNITED STATES DEPARTMENT OF AGRICULTURE

GRADUATE SCHOOL

THE PLACE OF THE DEPARTMENT OF AGRICULTURE IN THE EVOLUTION OF AGRICULTURAL POLICY

By M. L. Wilson, Assistant Secretary of Agriculture

Address, Department of Agriculture Auditorium, December 11, 1936. One of a Special Series of Lectures on Department Objectives presented under the auspices of the Graduate School.

The subject assigned to me for discussion in this series is phrased in such a way as to remind me of the talk I once heard an eminent political columnist make in New York. The title was phrased like this, "The Department of State and Its Responsibility to Public Opinion." The first thing this publicist said on arising was to re-phrase the subject in these words, "The Department of State, if any, and its responsibility, if any, to public opinion, if any."

Without casting any reflection on the Department of State or on the able public servants who compose it, I suppose if we were to examine this subject which I am to discuss today in this same light we should have to put it like this: "The place, if any, of the Department of Agriculture, if any, in the evolution, if any, of agricultural policy, if any."

Now, there is a facetious side to this phraseology but there is also, it seems to me, a side which bears a little closer examination. I think this more serious aspect could be stated in these words. We sort of assume without thought that the Department of Agriculture has a definite place in the evolution of national agricultural policy. Is this actually the case? As you know, I get great satisfaction out of philosophy, and I could take that one word "evolution" and talk about it in this connection for quite a while. Also, I could take the word "policy" and analyze that, too. I could ask myself a question which probably a great many Americans have asked themselves the last few years. Just what is policy? As a matter of fact, I have asked myself that, and I thought out three meanings of the word before looking it up in the dictionary, and when I looked it up I found my three answers didn't correspond very well with what the dictionary said. We use the word "policy" a great deal. The dictionary I looked in for this word is one of the new kind which I approve of, which places the word in our vocabulary with frequency as to which it's used. The word "policy" is in the first 3,000 words. That means, since it is in the 3,000 words, we all use it very commonly without strict adherence to any specific meaning. To me, the way we use the word, it has three possible meanings. Sometimes these meanings aren't in conflict with each other - sometimes they are.

I think a great many of us think of the word "policy", especially when we put that word "national" in front of it, as some very pronounced action of government which is supported by Acts of Congress or more definitely by laws, and we therefore speak of the policy which grew out of the AAA, the policy in connection with tariffs, policy of foreign relations. Then the word relates to something that ties things together. We speak of this institution or that institution having a definite policy, meaning that they have a lot of ideas which fit together into something which is rather consistent and in which there is unity. And I think there is a third meaning attached to this word "policy" that has something to do with goals and objectives. We frequently use the word "policy" -- perhaps a more accurate use of the word -- as meaning "goals" and "objectives" rather than the two other meanings. But I found the dictionary said it meant a plan of action or something to achieve a very definite end. The word is used very frequently in public and in private discussion and, like most words, it is assumed that all participants in the discussion mean the same thing when they use the same word. But it does not take very much thought on the subject to disclose some very puzzling and baffling aspects.

Where does policy begin? Where should it begin? Should agricultural policy be conceived of as something definite and apart from financial policy, from industrial policy, from the policy followed in connection with our transportation and distribution systems? Is an act of Congress necessary for the creation of policy? What happens to policy when the act is amended to such an extent that the original purpose is changed beyond recognition?

Without further discussion of this point, I think probably I make my thought clear. All of us here at least are convinced that there is such a thing as the Department of Agriculture. Moreover, all of us feel, although probably not to the same extent, that the Department has or should have a very definite role in the shaping and development of national agricultural policy. And I probably voice a general feeling among Departmental employees when I state that most of us think of policy as evolving and as changing from one phase to another, the exact shape and outlines depending upon the needs of the time.

And I am sure that all of us would agree today that we have an agricultural policy. Probably it is not complete. Probably it will have to be changed as the years come and go. Of course it is quite possible that, like most people who have played a part in creating a new thing or a different thing, we take unwarranted pride in our handiwork. Thus it may be that we have had an agricultural policy all of the time and we haven't known it. Thus, it may be that instead of a new policy, since 1933 we have been merely in a different stage of an old policy. The new elements, however, that have become part of the pattern of public thought on the agricultural situation since 1933 lend substance to the idea that since that date at least we have a more clearly fixed policy with relation to agriculture than ever before in our history.

Now, I think if we were to look back and study the beginnings of the idea of national agricultural policy, we would find that most of the thinking and writing has been done by the economists. This means, I think, that

policy has been conceived in economic terms and has been discussed and evaluated with economic principles in mind. The emphasis in this discussion has been on what the farmer should do in an economic sense -- how much land he ought to have in order to make a livelihood for himself and family -- how should the land be divided up into fields -- what should be sown in these fields -- what are the best methods to cut the labor cost and get the work done most quickly and efficiently -- when should he sell and how should he dispose of his cash income, if any?

Possibly this idea of agricultural policy has been summed up by Henry C. Wallace as well as by anyone when he talked of "agriculture's share of the national income." This was to him the objective towards which agricultural policy should be directed. He made the point clear in discussing the agricultural depression of 1921 and 1922. "The waste and distress," he said, "resulting from the agricultural depression have forcibly shown the need of a sound long-time policy for the development of our agriculture... We must develop a well-balanced agriculture which will give farmers a fair share in the national income."

Perhaps it is natural that the economists should have taken the lead in dealing with these phases of agricultural policy. Throughout our national history, at least until recent years, the dominant trend of agricultural development has been to consider the farm as a business proposition. This was true in the early days when farming was regarded as an individualistic enterprise. It has also been true more recently when collective action has replaced to a greater or less extent the individual when it comes to responsibility for improving national agricultural conditions. Throughout both of these phases the emphasis has been on the economic side of agriculture.

Now, as you know, I am an agricultural economist, and as such I suppose I have the privilege of critizing this conception of agricultural policy. It may be dangerous for me to do so. For an agricultural economist to criticize the economic base of agricultural policy would be almost in the same category as an Admiral in the Navy arguing for complete disarmament. When I criticize this conception of agricultural policy, I may find myself in turn criticized by a great many of my professional colleagues.

My criticism of this economic conception of agricultural policy is that it is too narrow. To me, a proper course of action in the field of agriculture should be built on a base which is broader than economics. By that I mean that something more than a strictly developmental and exploitative philosophy is necessary if we are to have the right kind of agricultural policy.

If, in addition to the economic base of agriculture, we consider also the relation and inter-relation of farming to industry, to finance, to trade and commerce, to transportation, then it seems to me the chances of a really effective policy being developed are greatly increased. It is natural, I suppose, that in a country as young as ours our policy as regards agriculture should evolve from a developmental one into one with a broader horizon. With the resources of a continent at our disposal and with conditions elsewhere in the world such as to make people look to America as the place where their ambitions could be realized, it would have been expecting too much, I fear, if our horizon included in our agricultural policy had been wider than that

of the most rapid exploitation of those resources. To me, both theoretically and as a matter of practical administration, we cannot advance our rural civilization very far unless in planning for it we think of agriculture as merely one element in the pattern of our national thought.

We find some evidence of this many-sided aspect of agricultural policy if we look at the present scope of the functions now performed by the Department. Two phrases sum up this outlook -- equality for agriculture and security for agriculture. Both of these include as a basic conception the all-embracing idea of rural-urban balance. Such a balance is unattainable, obviously, unless our more directly related activities, such as production, conservation, marketing, etc., are tied in with the activities of the city. This inter-relationship demands considerable thought and study. The people who shape industrial policies of price and production can help greatly in advancing this notion. The central and essential pre-requisite of purchasing power on the part of both urban dwellers and rural dwellers must be studied in all of its aspects. Our productive capacity in industry, if used with the idea of disposing of its products through a wide market at low price, would contribute to the more efficient use of our agricultural production machinery. The idea has been summed up in the following sentence from a recent report of the Secretary. "Agriculture must get industry to agree," he said, "that parity income for agriculture should come about not on an extremely high price level through competitive scarcity but on a lower level consistent with increased production and consumption." The criterion of agriculture's portion of the national income should be, as he states it, "an increasing share of an increasing total." This, I take it, is the basic ideal towards which our program will lead us and on which our agricultural policy is based.

You will see by now that there are a good many things of importance in the role of the Department of Agriculture in the evolution of national agricultural policy. The complete and effective acceptance of this point of view may result in a slightly different emphasis being placed upon the potentialities of science as a solvent for our difficulties.

You are familiar with the idea. It runs thus -- that science will provide the solution of man's problems.

It seems to me that, great as the potentialities of science are and marvelous as its contribution has been, we make a mistake if we look to it as the panacea for all our ills. Science can increase our knowledge of our environment. It can help us tremendously in increasing the production of our fields. It can aid us in foreseeing, within certain limits at least, what the weather will be. It can assist us in combatting insects and pests. It can gather the data which will show the exact picture of our marketing and distributing systems. All these things it can do in the field of agriculture. It is not necessary even to mention what it has done and seems likely to do in other fields.

But when we have said that we have still failed to get into the center of the problem of agricultural policy. Science can expand and deepen our horizon but it cannot give us much help in deciding in which direction we should go. Science can do great things in harnessing the forces of nature

but for the mass of people it can do little in changing their loyalties and affections. The problem of policy, whether in the realm of agriculture or in any other sector of activity, boils down to the matter of altering our loyalties and affections sufficiently to allow us to do things which otherwise we would not be willing to do.

In saying this I do not mean to minimize the importance of the scientific expert. It seems to me there are several things that the scientist can do better than anyone else. When it comes to policy-formation and administration, the experts can provide us with the scientific data which we need for the determination of policy. They can also indicate the broad limits within which policy is likely to function successfully. And the experts can assist the administrators in the process of educating the public by providing the administrators with the latest and most pertinent data.

If we look about us at what is going on in discussion of agricultural policy today, I think we can see two approaches or different kinds of thinking. One of these, I should say, is based on the historical, the evolutionary, the growth idea. If we would look into the Department's records we would find how new activities have been added to old ones and thus how policy, as used in this evolutionary sense, has been made. I have no doubt that Dr. Ball and others who have talked to you in this series of lectures have traced somewhat definitely the development that has been taking place in agriculture and in the industry of agricultural production throughout the nation.

On the other hand, there is that influence on policy which has originated within the Department itself. It is another way of thinking which is in contrast with the historical and evolutionary way. It attempts in some way or by some means to set up certain goals. Since policy, according to the definition which I found in the dictionary, is a system of management to accomplish a goal, then agricultural policy would be the mechanism or machinery by which these goals would be approached.

The most important thing I have seen recently, as illustrative of the last process, was worked out by the Iowa State College a few years ago. The goals which they were hoping to attain for agriculture were worked out. In June, 1935, they issued a mimeographed statement which happened to cross my desk. I picked it up because at the top of it I read: "Objectives for agriculture." Next I read, "Formulated by the Committee on agricultural philosophy and objectives of Iowa State College and approved by the agricultural staff of the College." The thing that caught my eye was that here was about the first time that I had seen that phrase "agricultural philosophy" used. This Committee stated that the objectives in agriculture in the State of Iowa were: (1) to obtain recognition of the interdependence of rural and urban interests. I take it that is the rural and urban balance which I talked of some time ago. That is the thing that Henry C. Wallace talked about as a fair share of national dividend going to agriculture; (2) favorable economic environment. (That is a pretty broad objective but that is the one they give as number 2); (3) efficient management and production methods, application of scientific technical knowledge in agriculture so as to give efficient management and production methods on farm; (4) effective group action through organization. Farmers should be organized,

I presume, so that they could exert effective group action as contrasted with individual action in a world in which group action almost completely dominates the scene; (5) a satisfactory social environment and standard of living; (6) adequate rural educational opportunities.

Let me go back over those again. Here is a Committee endeavoring to work out a form of agricultural philosophy -- an agricultural philosophy dealing not wholly with these immediate things in life that are before us, but which also lifts industry into its proper relationship with agriculture. We see in the second objective, favorable economic environment. Efficient management and production methods is the third. Fourth, effective group action through organization. Fifth, satisfactory social organization and standard of living. Sixth, adequate rural educational opportunities. I find that here is a type of thinking which grows out of the second process, which is more or less the planning kind of thinking. And while this Committee who struggled with it so long, and while the discussions which they had throughout the faculty and Experiment Station and Experiment staff struggled to balance this thing, they did two things. Essentially they were first of all trying to set out goals -- objectives -- and after they had set those objectives, then the method of reaching those objectives translated itself over to the planning realm. While our policies in the past, regardless of whatever they may have been, have more or less grown out of this stream of agricultural history for reasons I shall mention in a moment, I am inclined to think that the policies which we shall have from now on will follow to quite an extent this outline that I have just read you from the Iowa State College. They will be related to goals and objectives in agriculture and human life engaged in agriculture, and will use the planning type of mechanism to bring that about.

These functions of the expert which I was speaking of are all important. Through the research program of the Department, which has already been discussed in this series, it should be easier to formulate policy because of the more complete knowledge of our environment gained as a result of that program. But the matter of fixing a course, of orienting ourselves in our environment, is the question of which direction to go. These are matters on which the scientists, as scientists, can contribute little more than their personal opinions. The scientific method still is unable to tell us which of two alternative courses we should take. That selection requires the exercising of judgment, the weighing of alternatives, the measuring of a means in terms of its ability to attain an end.

A moment ago I said that scientists could assist administrators in the process of educating the public. It seems to me that this educational function is becoming more and more important in the pattern of our agricultural policy.

Education, you know, means to draw forth or to lead out, or rather the drawing forth, the leading out of something. The Department's role in this connection is that of drawing forth the best qualities and the greatest potentialities of the nation's rural people and of helping in the process of utilizing these qualities in forming and shaping policy. The raw material of this educational process is furnished by the research people in the Department and is disseminated through the Extension Service and the Triple A.

I am a great believer in the ability of the average man to find his way if he is given light. That is a philosophical statement, but it is a statement made from the standpoint of democracy. So much do I believe it that I should like to read that sentence again: "I am a great believer in the ability of the average man to find his way if he is given light." I believe that the farmers and the rural people of the nation can see their real interests far more clearly with facts before them than they can without the facts. It is true that facts do not dissolve prejudices when there is no will or interest on the part of the individual in giving up his prejudices. But the tenacity with which the farmer or the laborer holds to his delusion or to his preconception is weakened by facts which have been made available to him through a research program and through the technique of open democratic discussion. I do not think we should expect to make policy here in Washington, either here in the Department or in Congress; nor do I feel that policy should be made politically in the rural areas. The ideal situation to my mind is a relationship between the Department and Congress, on the one hand, and self-conscious, alert, well-informed and socially inspired groups of rural people on the other.

A national program for the organization of small groups of farmers to promote discussion and thinking about the important problems of democracy, and of agriculture in relation thereto, should become one of the major activities in the field of agricultural organization and education.

And closely related to this discussion group program is the county agricultural planning movement. In these planning operations we have economic democracy in action. We have farmers, experts, and administrators cooperating in the different phases of policy formation -- weighing and appraising the facts, exercising collective judgment as to programs and preparation for the administration of the agricultural conservation program. A relationship through which ideas and opinions can thus shuttle back and forth results in policy-making worthy of a democracy.

For those who are inclined to look with skepticism upon this educational phase of agricultural policy, I think we can calm our fears by recalling the development of the Department's outlook over the years. In the early days there was the technical phase of policy emphasizing production. This has been broadened and deepened by economic and statistical analysis, which in turn was followed by a wide sociological approach to the farm problem. Thus was produced the many-sided policy which we have today. This many-sided policy, as I have suggested, takes on meaning only when viewed in broad philosophical terms. Education is essential if the place of the more practical aspects of policy in the larger scheme of things is to be understood and comprehended by all citizens.

The history of man's development is the history of his ability to cooperate. This broad approach to policy, which I have been talking about, is most easily developed, nourished and sustained, in my opinion, in an atmosphere where cooperation is the basis of action. For farmers, it seems to me, this is important. Cooperation in production, in agricultural adjustment, in farm management, in distribution, and in marketing, is the type of economic activity which creates the most conducive atmosphere for seeing agricultural policy in its true light.

In these rambling remarks, what I have been trying to say is this: the frame of reference, within which our agricultural policy should be developed, has a very large ethical and moral content. Ethics deals with human values, both of the individual and of the group. Thus, ethics can help us construct this frame of reference. Experience has taught us beyond the shadow of a doubt that no longer is it possible for the individual to meet and solve by himself the baffling problems which surround him on all sides. Ethical systems based solely on individualism are no longer of much value to us. The solution to these problems must be sought, it seems to me, by the help of the agencies which society in its evolution through the ages has created. Of these agencies Government is the only one whose power is great enough and whose outlook is broad enough to think and act in terms of the general welfare. In its program of thought and action government will make fatal mistakes if the inspiration for its programs does not spring from an ethical base. We in America still believe in the value of the individual. We have not yet gotten to the position reached by certain other countries where the welfare of the state is the standard against which all individual and group values are measured. But we also know that the group, too, possesses real values. Our ethical base, then, will be one which will include the largest measure of individual liberty compatible with the welfare of the group and which maintains inviolate the processes of democratic government. Such a system of ethics, emphasizing the good of the many rather than of the few, will provide, it seems to me, a sound and enduring base for our national policy. This should be the starting point of any contribution, either of a scientific sort or of any other sort which the Department of Agriculture may make in the evolution of that policy.

I want to say a little in conclusion about the democratic processes in relation to formulation of policies of an agricultural nature, both as these flow from the Department of Agriculture and after they develop in the state. We have gone along with the development of democracy in America largely in the pioneer era. We haven't thought so much about the democratic processes nor the democratic ways of doing things. Changes have come about in the national economic system which necessitated national programs -- programs that must be broader than minor readjustments. It therefore becomes necessary for these programs to be national rather than piecemeal as they have been before. That creates a great responsibility so far as agriculture is concerned, and very great responsibility for the kind of programs, the kind of policies, which will be agricultural policies.

Now here is government -- here are the experts -- and here are 6,000,000 farmers. I presume we could have a situation -- and maybe there is such a situation in other countries of the world -- in which the policies or in which the ideas are pretty much produced in the brains of experts -- and pushed out by experts. If we had the purest kind of democracy, then the ideal would be policies made by the Department with the help of 6,000,000 farmers. But that raises the question of the relation of experts to 6,000,000 farmers. Everybody in the Department of Agriculture -- well, he should call himself an expert or helper of an expert.

The functions which the Department is rendering to the 6,000,000 families and to the people of the nation as a whole are the kind of functions and kind of things which they, because of the complex society in which we live, are unable to render to themselves.

Now think of the objectives which are set forth in that program I read from the Iowa State College. The actual technique which is in operation today, somewhat limited to the experimental project of discussion groups which are going on throughout the country and with the agricultural planning groups which are located in almost every county -- in almost every county in which there is an effective AAA program -- these are excellent examples of democratic processes of procedure in such manner that the maximum use is made of experts and of the product of experts. The actual formulation of policy when a policy appears is not the result of the Department of Agriculture; it is not the result of the administration in power; it is not the result of a majority in Congress; it is not the result of organized agriculture or pressure of groups but the result of intermingling of all these agencies which makes an intelligent national opinion which can express itself very definitely in this thing which we call policy.

Within the last three years, what I speak of as democratic policy has taken some very important steps forward. The AAA could have been administered by a state administrator and by one in each county. It wasn't administered in that way. It was administered through the formation in each county of a County Production Control Association made up of cooperating farmers in that county and a committee selected by these farmers in each community and in each county. That of itself has been a very great training school for democratic processes. Then the various referendums used in connection with the Triple A program I think gave every farmer the opportunity to think as best his mental equipment and his educational advantages would allow him to think -- how he was going to vote in the referendum with reference to the commodity in which he was interested. That was another great training school. The fact that every man voted on the referendum -- well, he had a feeling deep down somewhere that this wasn't something pushed on him but something upon which he was given an opportunity to express himself. I am certain that this feeling did a great deal to push along what I am calling a democratic process.

There have been started State discussion programs which have organized little groups of farmers. These groups do not want to be too big, groups of 10 to 15 people on about the same level -- people who meet in each other's sitting room in the winter to discuss and talk among themselves about some of the most important issues, well, let us call it agricultural policy; about what prices should be; what should be done about the increase in tenancy in the United States; what is the interest of farmers in foreign trade, etc. Just on the basis of discussion what one person says is stimulating to another.

If we could have through our educational system a great movement to stimulate these miscellaneous groups of people to study, think, and attempt to understand first of all what are the objectives, the values in life! These are things which the people in the Department should be seeking to accomplish. What are the economic problems in the realm of the nation's government and State government that have to be decided by the democratic processes -- go ahead and give a basis with which the 6,000,000 farmers may advance on what Secretary Wallace calls "the new frontier" and it would give a great example of formulation of agricultural policy -- not by us here in the Department of Agriculture; not by experts, but by democratic processes among the farmers themselves and those in society who could further contribute.

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UNITED STATES DEPARTMENT OF AGRICULTURE

ADDRESS TO THE GRADUATE SCHOOL

By

SECRETARY WALLACE

Address, Department of Agriculture Auditorium, December 18, 1936

I wish I could do for you in completeness just what the chairman of the meeting has suggested I ought to do for you, but, as a matter of fact, I was not aware I was speaking to this group on this particular day until a quarter of one. I had no opportunity to jot down any thoughts until in the midst of a Cabinet meeting this afternoon and the Cabinet meeting held until about twenty-five minutes of five, and so I am afraid I can't give you the well thoughtout talk you should have.

I think it is certainly important that, from time to time, all of us, wherever we may be, should have the opportunity to ask again "what is worth while." Young people, well, from sixteen to twenty, in their endeavors to orient themselves into this strange social organism in which they find themselves, ask that question, "what is worth while," in order to give them a motive and a purpose in life; and whenever we come to some crisis in our lives, again we find it necessary to ask that question. We find it necessary to relate our activity to some larger activity, because otherwise life loses its purpose. That is axiomatic. You want to feel that you are working for a cause greater than yourself, that you are working for something more than the dollars you get.

I suspect most people would not be in Government service if they didn't feel there was something else to it then the mere dollars. The people in the Department of Agriculture are unusually fortunate, it seems to me, in having an unusually large psychic income.

I read from a mimeographed folder at quarter of one today that I was supposed to talk on the social and economic objectives of the Department of Agriculture and why these social and economic objectives needed the centralizing power that can be furnished by the Department of Agriculture. Social and economic objectives. For my own part, I find it difficult really to separate the official and scientific activities of the Department from the social and economic activities. They all seem to dovetail into one picture.

A great many thinkers from time to time have undertaken to express the objectives of agriculture. My own grandfather, when he started a farm paper, used the motto, "Good farming, clear thinking, right living".

Sir Horace Plunkett, when he was thinking about agricultural objectives for Ireland, had a somewhat similar motto. "Better farming, better business, better living." As a foundation to the Irish approach, Sir Horace felt it was essential that farmers, so far as possible have security of tenure--in order that they might best be able to undertake the next step, which was cooperative buying and cooperative selling, as a preliminary to better living. It was essential to have farmers living in the same locality for a number of years, in order that they might be able to build up healthy cooperative business organizations, and then be able to build up a community method of life.

We in the United States, while we have had many cooperatives, have not yet had cooperatives which entered in any vital way into the community method of life. We have not, in the United States, approached any of these problems in any very thorough-going fashion.

The Department of Agriculture, up until 1910, perhaps, approached problems by the scientific route. It did a marvelous job and the old bureaus of the Department were bureaus that were associated with the scientific way of looking at things, such bureaus as the Bureau of Plant Industry, the Bureau of Animal Industry. Since 1912, the bureaus that have had to do with social and economic activities, especially economic activities, have come more and more into their own; not that in any way they have replaced the old bureaus, for they have not, and as we have come into the fields of social and economic activities, we have more and more touched the entire structure of life in these United States and we have found it necessary to inquire, among other things, as to ways in which the corporation form of organization has touched the city life in the United States, the way in which the corporation form of organization has touched the country life in the United States. We have been concerned with the ability of farmers to buy, the ability of farmers to exchange a certain amount of their goods for a certain amount of other goods. We have seen scientific activities started in some measure by the Department of Agriculture, in some measure by the experiment stations as fostered by the Federal Government, and in some measure by machinery companies, increase the productive power of the individual farmer by more than fifty percent in this century, and we have seen that increase in the productive power of the farmer not necessarily bring about an increase in the ability of the farmer to buy goods from the cities. We have seen these scientific things discovered by the Department of Agriculture, the experiment stations, and the private corporations help particularly the more well-to-do farmers. The Department of Agriculture and experiment stations had developed a clientele of their own, farmers who read the farmers' bulletins, the farmers who cultivated the acquaintance either of scientific men in Washington, or scientific men out in the field, and they were able to use the scientific discoveries first, and their efficienty began more and more to become greater than the efficiency of farmers who lived off the main traveled roads, who lived back in the mountains, who lived on the poorer lands, who operated the smaller farms, or who were so heavily mortgaged that they didn't have time to life their eyes from their immediate surroundings. So the better farmers began more and more to draw away from the poorer farmers, and for a time it seemed as though the objective of the Department of Agriculture was to make the more well-to-do farmers more efficient without regard to the poorer farmers.

Now, the Extension Service, which is a sort of link between the Department of Agriculture and the states in serving the individual farmers, started in a big way, perhaps about 1910 or 1912, with the county agent system, to address itself in considerable measure to this difficulty and endeavored especially in the South to carry scientific information to the humbler type of farmer. But here again it was discovered as the years went on that, after all, only the upper third of the farmers was being reached.

Now I am told that in all probability the Resettlement Administration is coming into the Department of Agriculture. The transfer has not actually been made, perhaps it won't be, but my guess is that probably the Resettlement Administration will be coming into the Department of Agriculture and therefore it might be appropriate if I would tell you very briefly my observations in going with some of the officials of the Resettlement Administration across the states of Arkansas, Mississippi, Alabama and Georgia. The Resettlement Administration is reaching perhaps the bottom twenty percent of the farmers who have never been reached by the Department of Agriculture or the experiment stations or colleges in the past, the most humble kinds of people. When I went with the Resettlement Administration across these southern states and we stopped in to visit what the Resettlement Administration calls their clients, it became apparent that these individuals are living with a standard of living far below the standard of any peasantry in Europe that I know anything about. I have visited peasantry in the Balkan States. I don't know how the peasantry of Russia live. The fact that we have so many people living as the lower twenty percent of the farmers live is a disgrace to our civilization. I am sure that nothing can be done about it in any very sudden manner. It will be a very, very slow process indeed, but I would say one of the objectives of the Department of Agriculture would be, in case the Resettlement Administration comes over to us, to see that the bottom one-fifth of the farmers is a little closer to the upper one-fifth than is the case at the present time. I am not expecting any miracles, but that gap must be lessened.

It is going to be necessary to put forth an extraordinary effort along that line because the mere fact of science and technology increasing almost in geometric proportions makes necessary an unusual consideration of the lower twenty percent of our population.

It has been customary for some people who have been superficially trained genetically to sneer at these people; it has been customary for certain individuals who have been trained in laissez faire economics to sneer at these people. I believe that those sneers are not well founded from either a genetic point of view or an economic point of view. It may be that there are perhaps twenty percent of this twenty percent who are not born just right. That is conceivable, but as you meet them, going from house to house, making allowances for their lack of education, for their inadequate nutrition, for bad teeth, malaria, hook worm, and bad tonsils, you can't help reaching the conclusion that from a genetic point of view--I will say from my own knowledge of genetics I would reach the conclusion, and I am quite willing to challenge any geneticist on this point, that eighty percent of these people on the Resettlement rolls are just as good as anyone else would average, just as good as we

here in this room. When it comes to seeing that they get adequate nutrition, medical attention, and adequate training, that is another matter. I don't say that the older people on Resettlement could learn new habits. All that you could hope for from them is that they live out their lives without too much misery. But there is the young generation coming on, eighty percent of whom have good germ plasm, eighty percent of whom, if given adequate training, can, if they have the opportunity, do just as well as any of the rest of us. I do hope that the Department of Agriculture will address a part of its ingenuity, whether it be in the B.A.E. or in the old scientific bureaus, whether it be in Triple A, or whether it be in Resettlement, to closing, as far as practical, the gap between these people and the better-- the upper twenty percent of the farmers.

It has been perfectly understandable why the Department of Agriculture, the experiment stations, and the extension service have cultivated the upper twenty percent of the farmers. Those are the people who have influence with Congressmen. It is just inevitable that clientele should be cultivated. Moreover, they are eager for the information which we hand out. It is right we should cultivate those people. They are fine upstanding citizens. Their fathers had advantages, their grandfathers had advantages. They have had the school training. We don't want to neglect them but we want to bring these bottom folks closer toward the top.

The fact of corporations in the United States during the past hundred years is in part responsible for this situation. There are two hundred corporations in the United States, which, previous to 1933, dominated the United States and they would like again to dominate the United States. There are many fine things about corporations. Corporations enable individuals to associate themselves together over a long period of time to accomplish big things over a continent. Corporations being defined as persons by the courts, but being longer lived and bigger than any person have built up for themselves a power during the past one hundred years that enables them to conduct regimentation of a type that is fully equal to anything that the Government has been accused of.

I mention corporations because, if the Department of Agriculture is going to do the job that it should do in the long run, it should either have the utmost cooperation from corporations as they exist, or something should be done about the corporations as they exist. There should be an integrated attack by the corporations on certain common problems which they are facing, going simultaneously with this attack which the Department of Agriculture and the experiment stations, ought to be able to make. The attack should be along the line of what is good for the greatest number in the long run, with enough competition to maintain real vitality in the body politic. The question is one of having sufficient distribution of income so that purchasing power is maintained and you do not have the recurring business depressions.

You may think this is outside the field of the objectives of the Department of Agriculture. I am mentioning these things because it is my observation that many of the scientific bureaus in the Department, many of the scientists in the Department and in the experiment stations, while very liberal in their approach to scientific matters, are very orthodox in their approach to economic matters, because many workers in the scientific bureaus were taught laissez faire economics when they went to the university, fifteen or twenty or thirty years ago. They have accepted that teaching without any questioning since. During the last fifteen years the world has changed. Many of the scientific workers do not realize the extent to which the world has changed. I think it is important that they do realize that extent. But the rules of the game of government do change. It is right that they change. You get these great tidal waves of public opinion that center around certain battle cries. You remember the tidal wave that came centering around the word "conservation" back arouhd 1907-8-9-10. That brought about changes that have been with us ever since. Conservation is still one of the words that means much to us. As a matter of fact, conservation is just coming into its full flower and fruit now.

The word "security" has been meaning more and more. In the early days of a civilization, the word "security" does not mean so much because everyone is reaching out to grab land. But when a country becomes filled up, then of necessity the word "security" means more and more. That results in changes of government. When you have the words "conservation" and "security" building up psychological complexes in the minds of many millions of people, certain things result with regard to laws and the rules of the game change.

We are going to have a great tidal wave of public opinion within the next five or ten years around the word recreation. One hundred years ago recreation was a sin and I suspect in the homes where most of you were raised recreation was a sin when you were children and the great god was work. One of these days recreation is going to become almost a duty except that the two terms conflict with each other in their very meaning, But if technology means anything, if science means anything, if this greatly increasing efficienty of man means anything, it means our whole attitude about the desires of man is going to change. If actually we can furnish enough of the old-fashioned type of goods, standard goods, with three or four hours of man labor per day, well, then, there is going to have to be something done with that leisure. Recreation is going to mean more and more. Not that I would suggest that we have finished for I recognize that along with increased emphasis on recreation there certainly must go simultaneously an increased emphasis on sufficiently wide distribution of income, so that people like this bottom twenty percent of the farmers--living, some of them, in houses with no doors, houses with no glass in the windows, with one bed perhaps to take care of a man and wife and four and five children, with sufficient holes in the roof so that you have to have an umbrella to keep the rain off you in case you were in that house when it rains--you must have sufficient distribution of income so that there will be sufficient opportunity for people of that sort, so that on the one hand the morale is restored and on the other hand they can have a standard of living that will not make us ashamed that we are citizens of the United States.

But I can see a situation where simultaneously you can, as habits are gradually changed, as education is diffused, as opportunities are presented, a situation where you can gradually pull up those under-privileged people, while at the same time there is vastly more recreation on the part of the great rank and file of the people of the United States. I think we will have to change our attitude about recreation. I think we will have to recognize that man was meant for joy and that we have the makings here for joy and that joy can be had. I would not have the fact of these under-privileged weigh down on us so that the fortunate upper one half could not enjoy themselves.

Now, I trust that this tidal wave that will center around the word "recreation" when it arises, will not be regimented or centralized in any part of government. I hope that our extension folks, insofar as they touch the recreation field, will not touch it in a formalized way. I trust that the Forestry Service, as it provides in connection with its other activities for camp sites, will not endeavor to formalize the recreational activities in any way. As a matter of fact, I am sure the Forestry Service will not, because I have seen enough of their recreational activities to be sure on that point. The very thought of regimenting recreation is repugnant, yet it is possible to furnish all over this country possibilities for simple outdoor recreation in connection with many of the activities of the Department of Agriculture.

I was happy to see that the Resettlement Administration, as a result of some of its land purchase programs, has been able to set up areas for recreation of people in the more humble strata of our society, even recreational areas for negroes, if you please.

Now, insofar as the Department of Agriculture in its far-flung activities through the various bureaus, attacks these problems, there will be money expended. It is orthodox economics, or rather it is the economics of orthodox economists employed by big corporations, that the budget should be continually cut down. And doubtless federal money should be spent with due caution, and yet I can conceive of this situation - unless the corporations are able to plan amongst themselves across corporation lines better than they have hitherto, can concern themselves more with the general welfare and a little less with their immediate situations, unless the corporations can plan better than they have so far, I can conceive of a situation where the corporations will be serving their own long time welfare if large income taxes are paid by them and spent by the government to conserve soil, if you please, to make scientific investigations all along the line, not only into the nature of the soil but into the nature of plants and animals, the way in which human beings utilize food; Government money spent not only for all the various scientific activities, federal money spent for the study of economic laws, federal money spent for the purchase of land, establishment of recreation, recreational opportunities on the land, federal money spent on projects that will give employment to the bottom twenty percent, whether they are in the town or on the land. I can foresee a program of that sort which, while tremendously expensive, might nevertheless result in the corporations having more money left over after they had paid their income taxes than if there had been no such program at all.

From the standpoint of the kind of economics we have been familiar with in the past, it might be more desirable if the corporations planned among themselves for the general welfare. I used to think that corporations gave conscious consideration to the larger aspects, but it really hasn't been true, and I don't know whether it ever will be true or not. We might hope it will be true. If it never comes to pass that they do plan together on inter-corporation affairs for the general welfare, obviously the federal government has to do it.

Now, insofar as the federal government does concern itself with far-flung activities out in the states, it is exceedingly necessary that there be the most vital local participation, the kind of economic democracy that has been built up in the Triple A. I always think of a tree when I think of this situation, of the sap carrying nutrition from the roots, of the leaves bringing in power from the sun, of the sap carrying back certain things from the leaves, of the sap carrying certain things to the leaves, of a continual interchange. That is not altogether a good analogy but I believe that the Department of Agriculture, in wrestling with this problem of the relationship between the federal government and the state governments, has gone farther than any other department. We have penetrated deeper into the necessity of that living vital relationship between the state and federal governments than any other agency, and one of the things about which all of us must puzzle our minds again and again, is determining what things are properly federal functions and what things are properly state functions, and there are many, many wise men in this room who have thought much deeper into that than I have.

There is also continually the problem of coordination between bureaus, and between bureaus in this Department and bureaus in other Departments. And I can see coming to the fore very definitely much thinking about the relationship between what you might call staff organization and line organizations. By staff organization I mean well, like the organization in the Secretary's office, to help me coordinate the work of the Bureaus, I suppose every bureau has a somewhat similar organization. Staff people have very hot problems to handle. They are always in a position of great difficulty. I suppose there is no man who has a harder job in some ways than the President's secretary. I am referring to his personal secretary over in the White House. In like manner, in the departments, I suppose there is no man who has a harder job in some ways than the Secretary's secretary and other men in that position. They must have tact, capacity, good health, and the ability to hold themselves as personalities continually in the background.

The people at the top of the line organizations are the ones who of necessity must come out in the public eye. And it is right they should come out in the public eye. In order to get certain things done, it is necessary to have things center around certain individuals. It is fine; it is part of the public education. And yet in regard to certain matters it is necessary that people in the line defer to certain self-effacing people in the staff in order that coordination be properly served. In an organization as large as the Department of Agriculture,

it is necessary that certain principles of hierarchy be observed. The problem is to maintain those principles of hierarchy along with the principles of life. And continually there must be life breathed into hierarchy. There must be life in the form. Whenever life if interjected certain logical principles are violated and the bureaus perhaps do not like it.

A greater part of the time it is wise that the bureaucratic procedure be followed, and I suggest that all of you pay due deference to the bureaucratic procedure. It is part of governmental wisdom, part of the way of living in government. I kicked about it when I came down here to Washington, just like most of you kicked about it. I kicked over the traces frequently, made mistakes frequently. On the whole I am a good bureaucrat now, yet I frequently realize the necessity for new life being breathed into bureaucracy. How to do that is the question, and I suggest that you don't breathe life into it too lightly without due consideration. But giving due consideration if you become aware quite confidently of the faults in the logical bureaucratic structure, it might be part of your service, proceeding in due form, to go to the person directly above you and say so and so. It might be a good thing if we had a procedure for that kind of a thing, filtering up the whole way through Government, some kind of clearing house at this stage of hierarchy for suggestions to come in and be reviewed.

This is not the kind of presentation which you expected. I could have given you a much greater reverence for the Department if I had followed some other course, but what I preferred to do really was to cause you to feel that you are part of a living organism here, a changing organism in a living country, in a country which is changing; that there are great forces playing in this country; that there will be great waves of tidal opinion such as you have seen at work during the past three or four years; that you must reckon with those waves of opinion. I wanted you to feel that on the one hand but to feel on the other hand that smooth functioning organization must be built so these waves of opinion can be put into actual function out in the field to change the future of our soil, the productivity of our land, to enable our people to have greater satisfaction, whether they live in town or on the land.

It is necessary, if those great waves of opinion are to be put into effect, to discover continually the type of government organization which will put them into effect. That is the challenging thing about it all to us here in government.

Now, I suppose many of you here are in quite humble positions in the Department, and you get down at 9 o'clock promptly, quit at 4:30 promptly, and you do your work in about the same way day after day, and you don't see how this talk has anything to do with that work. Yes, indeed, it does have a lot to do. There are thousands more like you. Sometimes I wonder, as I sign various orders and letters that come through and I ask that this be done and that be done, and sometimes I try to follow it back, sometimes I wonder who it is that does do the work, anyway, because I find that, if referred to a Bureau chief, usually he does not do the work. He refers it to a Division

chief, and he does not do the work. And I suspect, in the final analysis, it gets back to thousands just like many of you here, thousands and thousands. Thus it is that somehow or other this work gets done.

Now, I want to give my belief that I have come in touch with a great many of the people in the Department of Agriculture who have been here twenty, thirty, forty years, that there are some of the very finest people in the whole world in the Department, some of the most capable in the whole world in the Department, some of the most self-effacing, who are continually endeavoring to serve the general welfare through their service to agriculture. And that is the objective of the Department of Agriculture, serving the general welfare through agriculture. I trust that none of you are in the frame of mind where you feel that you are merely endeavoring, to serve a particular bureau or particular division in your bureau, or that you are endeavoring merely to serve the Department of Agriculture. You can serve the Department of Agriculture most effectively only if you feel at the same time you are serving the general welfare of the whole country. Returning to my original theme, I wisk to say that the thing supremely worth while is to feel continually in your special service that you are contributing to the general welfare in the long run.

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